PERIYAR UNIVERSITY

(NAAC 'A++' Grade with CGPA 3.61 (Cycle - 3)

State University - NIRF Rank 56 – State University Rank 25

SALEM - 636 011, Tamil Nadu.

CENTRE FOR DISTANCE AND ONLINE EDUCATION (CDOE)

MASTER OF COMMERCE

SEMESTER - I

CORE III: BANKING AND INSURANCE

(Candidates admitted from 2024 onwards)

PERIYAR UNIVERSITY

CENTRE FOR DISTANCE AND ONLINE EDUCATION (CDOE)

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Core: III

Banking and Insurance

Prepared by:

Centre for Distance and Online Education (CDOE),
Periyar University
Salem – 636 011.

SYLLABUS

BANKING AND INSURANCE

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BANKING AND INSURANCE

UNIT I: INTRODUCTION TO BANKING
Banking: Brief History of Banking – Rapid Transformation in Banking: Customer Shift – Fintech Overview - Fintech Outlook - The Financial Disruptors - Digital Financial Revolution - New Era of Banking. Digital Banking – Electronic Payment Systems– Electronic Fund Transfer System—Electronic Credit and Debit Clearing—NEFT—RTGS–VSAT–SFMS–SWIFT

INTRODUCTION TO BANKING

UNIT OBJECTIVES

Banking is a crucial component of the financial system, playing a pivotal role in economic stability and growth. At its core, banking involves the acceptance of deposits, provision of loans, and facilitation of financial transactions. Banks act as intermediaries between savers and borrowers, channeling funds from individuals and businesses with surplus capital to those in need of financing. This process supports investment, consumer spending, and overall economic activity.

Banks offer a range of services, including savings and checking accounts, personal and business loans, mortgages, and investment products. They also provide essential financial services such as payment processing, foreign exchange, and wealth management. By managing risks and ensuring liquidity, banks contribute to the smooth functioning of the economy.

The banking sector is regulated by national and international authorities to maintain financial stability, protect consumers, and ensure fair practices. Regulations often include capital requirements, liquidity standards, and risk management practices to safeguard against economic shocks and banking crises.

With the advent of digital technology, banking has evolved significantly, introducing online and mobile banking, fintech innovations, and enhanced customer experiences. As a result, modern banking continues to adapt, focusing on efficiency, security, and customer-centric solutions to meet the evolving needs of a global economy.

SECTION 1.1: INTRODUCTION TO BANKING

1.1.1 Brief History of Banking

Introduction

The history of banking began with the first prototype banks, that is, the merchants of the world, who gave grain loans to farmers and traders who carried goods between cities. This was around 2000 BC in Assyria, India and Sumer. Later,

in ancient Greece and during the Roman Empire, lenders based in temples gave loans, while accepting deposits and performing the change of money. Archaeology from this period in ancient China and India also show evidences of money lending.

Many scholars trace the historical roots of the modern banking system to medieval and Renaissance Italy, particularly the affluent cities of Florence, Venice and Genoa. The Bardi and Peruzzi families dominated banking in 14th century Florence, establishing branches in many other parts of Europe. The most famous Italian bank was the Medici Bank, established by Giovanni Medici in 1397. The oldest bank still in existence is Banca Monte dei Paschi di Siena, headquartered in Siena, Italy, which has been operating continuously since 1472. Until the end of 2002, the oldest bank still in operation was the Banco di Napoli headquartered in Naples, Italy, which had been operating since 1463.

Development of banking spread from northern Italy throughout the Holy Roman Empire, and in the 15th and 16th century to northern Europe. This was followed by a number of important innovations that took place in Amsterdam during the Dutch Republic in the 17th century, and in London since the 18th century. During the 20th century, developments in telecommunications and computing caused major changes to banks' operations and let banks dramatically increase in size and geographic spread. The financial crisis of 2007–2008 caused many bank failures, including some of the world's largest banks, and provoked much debate about bank regulation.

Ancient authority

The shift from a reliance on hunting and gathering of foods to agricultural practices, starting sometime after 12,000 BCE, resulted in increased stability of economic relations. Such changes in socio-economic conditions began approximately 10,000 years ago in the Fertile Crescent, about 9,500 years ago in northern China, about 5,500 years ago in Mexico, and approximately 4,500 years ago in the eastern parts of the United States.

Monetary

Ancient types of money known as grain-money and food cattle-money were used from around 9000 BCE as two of the earliest commodities used for purposes of bartering. Anatolian obsidian as a raw material for Stone Age tools was being distributed from as early as about 12,500 BCE, and organized trading of it was occurring during the 9th millennium BCE. Sardinia was one of the four main sites for sourcing the material deposits of obsidian within the Mediterranean; trade using obsidian was replaced during the 3rd millennium BCE by trade of copper and silver.

Record-keeping

Objects used for record keeping, "bulla" and *tokens*, have been recovered from within Near East excavations, dated to a period beginning 8000 BCE and ending 1500 BCE, as records of the counting of agricultural produce. Commencing in the late fourth millennia mnemonic symbols were in use by members of temples and palaces to record stocks of produce. Types of records accounting for trade exchanges of payments were first being made about 3200 BCE. The Code of Hammurabi, written on a clay tablet around 1700 BCE, describes the regulation of banking activity within the civilization (Armstrong); although still rudimentary, banking was well enough developed to justify laws governing banking operations. Later during the Achaemenid Empire (after 646 BCE), further evidence is found of banking practices in the Mesopotamia region.

Structural

By the 5th millennium BC, the settlements of Sumer, such as Eridu, were formed around a central temple. In the fifth millennium, people began to build and live in the civilization of cities, providing a structure for the construction of institutions and establishments. Tell Brak and Uruk were two early urban settlements.

1.1.2 Rapid Transformation in Banking

The world as we know it is rapidly changing and becoming increasingly digital. This shift has touched almost every industry, and banking is no exception. Today customers expect the same level of convenience and accessibility from the financial

services they get from other online services. To meet these demands and stay competitive, banking institutions are facing the need for digital transformation.

Digital transformation for banks is about more than just updating technology. It's about reimagining how banking is done and creating a more customer-centric experience. By embracing digital transformation, banks can streamline operations, enhance security, and provide their customers with the services they need when and where they need them. It's an exciting time to be a part of this industry, and being one, we are happy to share a lot about digital transformation in banking and its main trends. What drives the digital banking transformation, which technologies help to provide it, and much other beneficial information waits for you here.

Digital transformation

Digital transformation is changing the way businesses operate and interact with customers. Across various industries, companies are adopting new technologies to drive innovation and enhance the customer experience.

For instance, the retail sector has embraced online shopping and mobile commerce, integrating technologies such as AI, Big Data, and IoT to provide personalized shopping experiences and optimized supply chains. The healthcare industry has also undergone significant change, with the widespread use of electronic health records, telemedicine, and wearable devices, allowing healthcare providers to offer more accessible and personalized patient care. Meanwhile, the transportation industry has been disrupted by ride-sharing companies, and the rise of electric vehicles has introduced new business models and technologies like battery-swapping and vehicle-to-grid integration.

So digital transformation enables businesses to create more and more new opportunities, increase efficiency, and improve the customer experience. As technology evolves and customer expectations change, we can see further digital transformation across other industries, such as financial ones.

Digital transformation in financial services

The financial industry is also experiencing a profound transformation because of digitization. New technologies such as blockchain, smart contracts, and more

have paved the way for advanced financial solutions shaking up the status quo. These innovative solutions offer a level of efficiency, security, and convenience that is unmatched by traditional banking systems.

So the transformation of the financial industry began with the rise of alternative financial solutions, such as centralized and decentralized crypto exchanges, NFT marketplaces, and many more. Then, traditional financial institutions have seen the full potential and high demand of these new technologies and got the necessary to implement them to stay competitive. This digital transformation is bringing the financial industry to the forefront of a technological revolution and evolving even the most conservative players.

Challenges of the shift from traditional to digital banking

In today's rapidly evolving digital landscape, traditional financial institutions must improve their systems to keep up with customers' demands and remain competitive. Despite the tremendous opportunities, implementing new technology for banks can be challenging. Such challenges include:

1. ### Outdated Technology

   The technology used by traditional banking systems often needs to be updated and able to keep pace with the innovations of the financial industry. This can lead to a lack of integration with new services, slow development of new features, and limited use of different assets.

2. ### Security and Privacy Concerns

   The security and privacy of customers' financial information and transactions are paramount. However, traditional banking systems can often be vulnerable to cyber-attacks and data breaches, compromising the security of sensitive information.

3. ### Lack of Accessibility and Convenience

   Traditional banking systems are often hindered by their limited accessibility. Many customers need help accessing their accounts and financial information from remote locations. Additionally, the processes

involved in accessing financial services can be time-consuming and inconvenient, leading to frustrated customers.

4. **Inefficient Processes**

Traditional banking systems are often bogged down by inefficient processes, including long wait times, manual procedures, and a lack of transparency. This can lead to a negative customer experience and increase operational costs for financial institutions.

5. **Limited Scalability**

Traditional banking systems often need help to scale operations effectively, leading to increased costs and reduced efficiency. This can also hinder their ability to expand into new markets and offer new services to customers.

Benefits of digital transformation for banking

Traditional banks still hold certain advantages when facing the challenges of more advanced digital financial solutions, which, if used properly, can give them many more benefits. One of the main advantages is their long history and established reputation, which follows the next:

1. **Large Customer Base**

Traditional banks already have a huge user base, a costly and lengthy collection they can afford to avoid. This initially gives them access to a huge amount of data, including extremely sensitive data such as passport information, driver's licenses, insurance, etc. All of this puts traditional banks many steps ahead.

2. **Regulatory Advantages and Reputable Legacy**

Their operations have long been regulated, and their customer base is substantial. Additionally, they have fewer limitations on collecting and processing user data. This provides them with a solid foundation to embrace digital transformation.

3. **Seamless Implementation of Advanced Technology**

Traditional banks have more resources to hire the world's best experts to modernize their infrastructure and architecture and implement new technologies the most efficiently and seamlessly. It allows them to integrate their operations with government and third-party services, ensuring a smooth and regulated process.

4. **Improved Asset Management**

The digital transformation of traditional banking allows for offering both traditional and many other asset management with a higher degree of security and flexibility. This improved asset management also enables banks to provide better rates, lower fees, and guaranteed payouts, enhancing the overall customer experience.

Digital Transformation Trends in Banking

To succeed in the rapidly evolving digital landscape, banks must rethink their value proposition to enhance the customer experience and leverage data to create value. This requires banks to prioritize multiple businesses depending on their resources and competitive strengths and build digital platforms that support the entire customer journey from search to management.

For daily banking, the platform should simplify transactions by integrating them into the customer journey and offering fast and convenient access to various retailers and service providers.

For home and life events, the platform should offer a comprehensive solution by partnering with various businesses to support the entire journey from search to financing and ongoing management.

Finally, for wealth and protection services, the platform should differentiate itself through customer data to deliver highly personalized advisory services, empowering investors to make informed decisions about growing and preserving their wealth over the long term.

Drivers of Digital Transformation In Banking

The banking industry is undergoing a major transformation due to technological advancements and changing customer preferences. Banks must embrace digitalization and leverage new technologies to provide a better customer experience and create value through data in this new digital environment. The following are some of the key drivers of this transformation.

1. Mobile Apps

Mobile banking is one of the main drivers of digital transformation in the banking industry. With the widespread use of smartphones, customers have easier and faster access to information and the tools to make financial decisions. Mobile banking provides a high-quality data collection experience, immediate access to solutions, and a user-friendly experience. Additionally, the emergence of "super applications" has further emphasized the importance of mobile banking in the financial services sector.

2. Importance of Customers

Banks must prioritize putting their customers at the center of their digital transformation efforts. By understanding and addressing their customers' needs and preferences, they can ensure that they are providing relevant and valuable services. This includes gathering and analyzing customer data to deliver personalized and targeted services and provide a seamless customer experience across all channels.

3. Continuous Improvement

Digital transformation in banking is an ongoing journey of improvement. Banks must be willing to adapt and change as new technologies and customer preferences emerge to remain competitive. This includes regularly reassessing their digital strategy and making necessary changes to their technology stack and operating model.

4. Modernized Infrastructure

Banks must invest in modernizing their infrastructure to support digital transformation. This includes upgrading hardware, software, and networks to

support digital operations and provide a seamless customer experience. It also involves implementing robust security measures to protect customer data and ensure the integrity of digital transactions.

5. Operating Model

Digital transformation in the banking industry requires a shift in the traditional operating model. This may involve streamlining processes, integrating new systems, and changing the organizational structure to align with the bank's digital strategy. Banks must also ensure that their employees are equipped with the necessary skills to succeed in a digital environment.

6. The Power of Data

Data is a critical driver of digital transformation in the banking industry. By leveraging customer data, banks can gain valuable insights into customer behavior and preferences, improve their decision-making processes and deliver more personalized and relevant services. This includes data analytics to identify trends and patterns and artificial intelligence and machine learning to automate processes and deliver targeted services to customers.

7. Complete Digitally-Driven Market

The banking industry is being transformed by the emergence of a completely digitally-driven market, where customers expect immediate access to financial services and solutions from their own devices. Banks must embrace digital transformation to remain competitive and meet the evolving needs of their customers. This includes offering a wide range of digital services and solutions and providing a seamless, secure, and convenient digital experience.

Digital Technologies Utilized by Modern Banks

To elaborate on the impact of drivers, modern banks are looking at innovative technologies not just as a means to improve their operations and services but also to fundamentally change the way they conduct their business. The following are the technologies being used in the banking industry:

1. Robotic process automation (RPA)

RPA is used by banks to automate routine and repetitive tasks, freeing employees to focus on more value-adding activities. Banks are using RPA to automate processes such as data entry, account reconciliation, and customer service. This technology is improving the efficiency and accuracy of processes, reducing costs, and improving customer experiences. For example, BNP Paribas is using RPA to automate its back-office operations, leading to faster and more accurate processing of customer transactions.

2. Biometrics

Biometric technologies, such as facial recognition and fingerprint scanning, are being used by banks to improve the security and convenience of their services. Banks use biometrics to identify customers, reduce the risk of fraud, and streamline processes. For example, JPMorgan Chase is using biometrics to allow customers to access their accounts using their fingerprints or facial recognition, providing a more secure and convenient experience.

3. Mobile and embedded devices

Mobile devices and embedded technologies have revolutionized the way customers interact with their banks. Banks are utilizing these technologies to provide customers with convenient, accessible, and secure banking services through mobile apps, digital wallets, and smart devices. By leveraging these technologies, banks can enhance customer experience, improve operational efficiency, and increase customer engagement. Additionally, mobile and embedded devices enable new business models and revenue streams, such as mobile payments and P2P transfers. Through their integration with existing bank solutions, these technologies enhance their capabilities and provide customers with an even more comprehensive banking experience.

4. Artificial intelligence & machine learning

These technologies are being used by banks to analyze large amounts of data, automate processes, and provide personalized services to customers. It helps to improve the accuracy and speed of fraud detection, credit scoring, and customer

service. Banks are also using these technologies to personalize services, such as providing customized investment recommendations to clients. For example, Citigroup has developed an AI-powered virtual financial advisor that provides personalized investment advice to customers.

5. Big data collection, management & analysis

Big data is playing an increasingly important role in the banking industry, helping banks to make informed decisions, improve customer experiences, and stay ahead of the competition. Banks are using big data to collect, store, and analyze data from various sources, including customer transactions, social media, and other sources. This technology helps to identify patterns and trends in customer behavior, target marketing efforts, and prevent fraud. For example, HSBC is using big data to improve its customer segmentation and targeting, leading to better customer engagement and higher sales.

6. Cloud technology

The cloud enables banks to move away from outdated and inflexible infrastructure to a more agile and scalable platform. Banks use cloud technology to store and manage data, run applications, and host services. This technology has allowed banks to become more agile, respond to changing customer needs more quickly, and reduce operational costs. For example, Goldman Sachs has adopted cloud technology to modernize its IT infrastructure, improve security, and streamline processes.

7. Blockchain technology

This decentralized ledger technology is revolutionizing the way transactions are conducted, ensuring that they are secure, transparent, and tamper-proof. It eliminates intermediaries, reduces costs, and streamlines processes, making it a game-changer for the banking industry. Banks are using blockchain to create new products, such as digital currencies, and improve cross-border transactions' speed and efficiency. For example, JPMorgan Chase uses blockchain technology to create a settlement platform for its clients.

Banking Digital Transformation Solutions

Many banks have already created a number of solutions based on implementing those new technologies that have already transformed their operations. And they continue to successfully invest in it, now gaining more and more benefits. The following companies are prime examples of digital transformation.

The Commonwealth Bank of Australia (CBA) has been at the forefront of digital transformation in the banking industry, utilizing innovative technologies such as artificial intelligence and blockchain to improve customer experiences and streamline operations. One of the key initiatives that CBA has undertaken is the implementation of AI-powered virtual assistants to provide 24/7 customer support and automate routine tasks. Additionally, CBA has leveraged blockchain technology to simplify and secure cross-border payments and supply chain management.

NatWest has taken significant strides towards digitization in recent years, leveraging cutting-edge technologies such as mobile and embedded devices and biometrics to enhance customer experiences and streamline operations. One of the major initiatives that NatWest has undertaken is the implementation of biometric authentication through facial recognition and fingerprint scanning to provide customers with a secure and convenient way to access their accounts. Additionally, NatWest has developed a robust mobile banking app that allows customers to access their accounts and perform transactions on the go.

Santander UK has proactively embraced digital transformation, leveraging advanced technologies such as cloud computing and artificial intelligence to drive innovation and improve customer experiences. One of the key initiatives Santander UK has undertaken is the implementation of cloud-based infrastructure to enhance data security and improve scalability. Additionally, Santander UK has utilized AI-powered algorithms to automate routine tasks, such as fraud detection and customer service, freeing up staff to focus on more complex and value-adding activities.

The 4 Biggest Consumer Behavior Shifts

Consumer behavior has seen significant shifts in recent years, influenced by various factors such as technology, societal changes, and global events. Here are the four biggest consumer behavior shifts:

1. Digital and Online Shopping Boom

(i) E-commerce Growth: The rise of online shopping has been exponential, especially accelerated by the COVID-19 pandemic. Consumers increasingly prefer the convenience and variety offered by online platforms.

(ii) Mobile Commerce: With the proliferation of smartphones, mobile shopping has become a major trend. Consumers are using apps and mobile websites to make purchases on the go.

(iii) Omni channel Retailing: Retailers are integrating their online and offline channels to provide a seamless shopping experience. Click-and-collect services, where consumers buy online and pick up in-store, have become popular.

2. Focus on Health and Wellness:

(i) Health-Conscious Choices: There is a growing trend towards healthier lifestyles. Consumers are more informed about the benefits of nutritious food, exercise, and mental well-being.

(ii) Clean and Sustainable Products: The demand for organic, non-GMO, and environmentally friendly products has surged. People are willing to pay a premium for products that align with their health and ethical values.

(iii) Fitness and Wearable Technology: The use of fitness trackers and health monitoring devices has increased. Consumers are using technology to track their health metrics and improve their wellness routines.

3. **Sustainability and Ethical Consumption:**

(i) Eco-Friendly Products: There is a strong shift towards products that are sustainable and have a minimal environmental impact. This includes everything from food and clothing to electronics and home goods.

(ii) Corporate Social Responsibility (CSR): Consumers are increasingly supporting brands that demonstrate a commitment to ethical practices, social responsibility, and environmental sustainability.

(iii)Reduced Waste: There is a growing preference for products with minimal packaging, reusable items, and brands that promote recycling and upcycling.

4. Experience Over Ownership:

(i) Experiential Spending: Consumers, particularly younger generations, are prioritizing experiences over material possessions. This includes spending on travel, dining, entertainment, and unique activities.

(ii) Subscription Services: The popularity of subscription services for everything from streaming content to meal kits and beauty boxes reflects a shift towards convenience and curated experiences.

(iii) Sharing Economy: Platforms like Airbnb, Uber, and various peer-to-peer rental services illustrate a move towards sharing resources rather than owning them outright. This trend is driven by a desire for flexibility, cost savings, and a reduced environmental footprint.

1.1.3 Customer shifting

A close watch of economy, government policies, industrial scenario and the middle class habits provide an insight to the banks to study and watch the shift in saving/borrowing habits of its customers. The change in macro-economy affect the customer's behaviour at the micro-level due to which proper research and analysis of the trends of demand and supply as well as the shifts in pattern of various deposits gives an idea and opportunity for the bank to change its products with respect to the

design, pricing and need to launch new or innovative products/services to ensure customer's interest and loyalty to their bank accounts. Through observing and monitoring the product life cycle, it becomes easier to decide and implement the product development strategy.

Generally, these are four strategies recommended for growth in business and profits which are:

1) Market Penetration
2) Market Development
3) Product Development
4) Product Diversification.

Let's Sum Up

Digital transformation for banks is about more than just updating technology. It's about reimagining how banking is done and creating a more customer- centric experience.

Digital transformation is changing the way businesses operate and interact with customers. Across various industries, companies are adopting new technologies to drive innovation and enhance the customer experience.

The financial industry is also experiencing a profound transformation because of digitization. New technologies such as blockchain, smart contracts, and more have paved the way for advanced financial solutions shaking up the status quo.

Banks must embrace digitalization and leverage new technologies to provide a better customer experience and create value through data in this new digital environment.

The change in macro-economy affect the customer's behaviour at the micro- level due to which proper research and analysis of the trends of demand and supply as well as the shifts in pattern of various deposits gives an idea and opportunity for the bank to change its products with respect to the design, pricing and need to launch new or innovative products/services to ensure customer's interest and loyalty to their bank accounts.

CHECK YOUR PROGRESS – QUIZ - 1

1. Which of the following innovations was crucial in transforming banking during the late 20th century?
    a. Gold Standard
    b. Automated Teller Machines (ATMs)
    c. Barter System
    d. Paper Money
2. The introduction of internet banking primarily aimed to:
    a. Increase physical bank branches
    b. Reduce the need for cash transactions
    c. Enhance customer convenience and access to banking services
    d. Promote the use of checks
3. Which of these technologies significantly improved real-time transaction processing in banking?
    a. Blockchain Technology
    b. Magnetic Stripe Cards
    c. Telegraph
    d. Personal Savings Accounts
4. The concept of mobile banking first gained significant traction in which decade?
    a. 1960s
    b. 1970s
    c. 1990s
    d. 2010s
5. What is the primary goal of digital transformation in organizations?
    a. To reduce the workforce
    b. To adopt the latest technologies
    c. To optimize business processes and improve performance
    d. To decrease customer engagement

Answers:

1. b. Automated Teller Machines (ATMs)
2. c. Enhance customer convenience and access to banking services
3. a. Blockchain Technology
4. c. 1990s
5. c To optimize business processes and improve performance

SECTION 1.2: FINTECH OVERVIEW

1.2.1 Financial Technology (Fintech)

Financial technology (better known as fintech) is used to describe new technology that seeks to improve and automate the delivery and use of financial services. At its core, fintech is utilized to help companies, business owners, and consumers better manage their financial operations, processes, and lives. It is composed of specialized software and algorithms that are used on computers and smartphones. Fintech, the word, is a shortened combination of —financial technology.

When fintech emerged in the 21st century, the term was initially applied to the technology employed at the backend systems of established financial institutions, such as banks. From 2018 or so to 2022, there was a shift to consumer-oriented services. Fintech now includes different sectors and industries such as education, retail banking, fundraising and non-profit, and investment management, to name a few.

Fintech also includes the development and use of cryptocurrencies, such as Bitcoin. While that segment of fintech may see the most headlines, the big money still lies in the traditional global banking industry and its multitrillion-dollar market capitalization.

Understanding Fintech

Broadly, the term —financial technology‖ can apply to any innovation in how people transact business, from the invention of digital money to double-entry bookkeeping. Since the internet revolution, financial technology has grown explosively.

Users likely use some element of fintech on a daily basis. Some examples include transferring money from your debit account to your checking account via your iPhone, sending money to a friend through Venmo, or managing investments through an online broker. According to EY‘s 2019 Global FinTech Adoption Index, two-thirds of consumers utilize at least two or more fintech services, and those consumers are increasingly aware of fintech as a part of their daily lives.

Fintech in Practice

The most talked-about (and most funded) fintech startups share the same characteristic: They are designed to challenge, and eventually take over, traditional financial services providers by being more nimble, serving an underserved segment of the population, or providing faster or better service.

For example, financial company Affirm seeks to cut credit card companies out of the online shopping process by offering a way for consumers to secure immediate, short-term loans for purchases. While rates can be high, Affirm claims to offer a way for consumers with poor or no credit a way to secure credit and build their credit history.

Better Mortgage seeks to streamline the home mortgage process with a digital-only offering that can reward users with a verified pre-approval letter within 24 hours of applying. GreenSky seeks to link home improvement borrowers with banks by helping consumers avoid lenders and save on interest by offering zero-interest promotional periods.

For consumers with poor or no credit, Tala offers consumers in the developing world microloans by doing a deep data dig on their smartphones for their transaction history and seemingly unrelated things, such as what mobile games they play. Tala seeks to give such consumers better options than local banks, unregulated lenders, and other microfinance institutions.

In short, if you have ever wondered why some aspect of your financial life was so unpleasant (such as applying for a mortgage with a traditional lender) or felt like it wasn‘t quite the right fit, fintech probably has (or seeks to have) a solution for you.

Fintech’s Expanding Horizons

In its most basic form, fintech unbundles financial services into individual offerings that are often easier to use. The combination of streamlined offerings with technology allows fintech companies to be more efficient and cut down on costs associated with each transaction.

If one word can describe how many fintech innovations have affected traditional trading, banking, financial advice, and products, it‘s —disruption‖—a word you have likely heard in commonplace conversations or the media. Financial

products and services that were once the realm of branches, salespeople, and desktops are now more commonly found on mobile devices.

For example, the mobile-only stock trading app Robinhood charges no fees for trades, and peer-to-peer (P2P) lending sites like Prosper Marketplace, Lending Club, and On Deck promise to reduce rates by opening up competition for loans to broad market forces. Business loan providers such as Kabbage, Lendio, Accion, and Funding Circle (among others) offer startup and established businesses easy, fast platforms to secure working capital. Oscar, an online insurance startup, received $165 million in funding in March 2018. Such significant funding rounds are not unusual and occur globally for fintech startups.

This shift to a digital-first mindset has pushed several traditional institutions to invest heavily in similar products. For example, investment bank Goldman Sachs launched consumer lending platform Marcus in 2016 in an effort to enter the fintech space.

That said, many tech-savvy industry watchers warn that keeping apace of fintech-inspired innovations requires more than just ramped-up tech spending. Rather, competing with lighter-on-their-feet startups requires a significant change in thinking, processes, decision making, and even overall corporate structure.

Fintech and New Technologies

New technologies, such as machine learning / Artificial intelligence (AI), redictive behavioral analytics, and data-driven marketing, will take the guesswork and habit out of financial decisions. —Learningll apps will not only learn the habits of users but also engage users in learning games to make their automatic, unconscious spending and saving decisions better.

Fintech is also a keen adapter of automated customer service technology, utilizing chatbots and AI interfaces to assist customers with basic tasks and keep down staffing costs. Fintech is also being leveraged to fight fraud by leveraging information about payment history to flag transactions that are outside the norm.

Fintech Landscape

Since the mid-2010s, fintech has exploded, with startups receiving billions in venture funding (some of which have become unicorns) and incumbent financial firms either snatching up new ventures or building out their own fintech offerings.

North America still produces most of the fintech startups, with Asia a relatively close second, followed by Europe. Some of the most active areas of fintech innovation include or revolve around the following areas (among others):

- Cryptocurrency (Bitcoin, Ethereum, etc.), digital tokens (e.g., non-fungible tokens, or NFTs), and digital cash. These often rely on blockchain technology, which is a distributed ledger technology (DLT) that maintains records on a network of computers but has no central ledger. Blockchain also allows for so-called smart contracts, which utilize code to automatically execute contracts between parties such as buyers and sellers.
- Open banking, which is a concept that proposes that all people should have access to bank data to build applications that create a connected network of financial institutions and third-party providers. An example is the all-in-one money management tool Mint.
- Insurtech, which seeks to use technology to simplify and streamline the insurance industry.
- Regtech, which seeks to help financial service firms meet industry compliance rules, especially those covering Anti-Money Laundering and Know Your Customer protocols that fight fraud.
- Robo-advisors, such as Betterment, utilize algorithms to automate investment advice to lower its cost and increase accessibility. This is one of the most common areas where fintech is known and used.
- Unbanked/underbanked services that seek to serve disadvantaged or low-income individuals who are ignored or underserved by traditional banks or mainstream financial services companies. These applications promote financial inclusion.

- Cybersecurity. Given the proliferation of cybercrime and the decentralized storage of data, cybersecurity and fintech are intertwined.

- AI chatbots, which rose to popularity in 2022, are another example of fintech's rising presence in day-to-day usage.

Fintech Users

There are four broad categories of users for fintech:

- Business-to-business (B2B) for banks
- Clients of B2B banks
- Business-to-consumer (B2C) for small businesses
- Consumers

Trends toward mobile banking, increased information, data, more accurate analytics, and decentralization of access will create opportunities for all four groups to interact in unprecedented ways.

As for consumers, the younger you are, the more likely it will be that you are aware of and can accurately describe what fintech is. Consumer-oriented fintech is mostly targeted toward Gen Z and millennials, given the huge size and rising earning potential of these generations.

When it comes to businesses, before the adoption of fintech, a business owner or startup would have gone to a bank to secure financing or startup capital. If they intended to accept credit card payments, they would have to establish a relationship with a credit provider and even install infrastructure, such as a landline-connected card reader. Now, with mobile technology, those hurdles are a thing of the past.

Regulation and Fintech

Financial services are among the most heavily regulated sectors in the world. As such, regulation has emerged as the number one concern among governments as fintech companies take off.

According to the U.S. Department of the Treasury, while fintech firms create new opportunities and capabilities for companies and consumers, they are also

creating new risks to be aware of —Data privacy and regulatory arbitrage‖ are the it comes to nonbank firms.

Regulation main concerns noted by the Treasury. In its most recent report in November 2022, the Treasury called for enhanced oversight of consumer financial activities, specifically when is also a problem in the emerging world of cryptocurrencies. Initial coin offerings (ICOs) are a form of fundraising that allows startups to raise capital directly from lay investors. In most countries, they are unregulated and have become fertile ground for scams and frauds. Regulatory uncertainty for ICOs has also allowed entrepreneurs to slip security tokens disguised as utility tokens past the U.S. Securities and Exchange Commission (SEC) to avoid fees and compliance costs.

Because of the diversity of offerings in fintech and the disparate industries it touches, it is difficult to formulate a single and comprehensive approach to these problems. For the most part, governments have used existing regulations and, in some cases, customized them to regulate fintech.

Examples of fintech

Fintech has been applied to many areas of finance. Here are just a few examples.

- **Robo-advisors** are apps or online platforms that optimally invest your money automatically, often for little cost, and are accessible to ordinary individuals.
- **Investment apps** like Robinhood make it easy to buy and sell stocks, exchange-traded funds (ETFs), and cryptocurrency from your mobile device, often with little or no commission.
- **Payment apps** like PayPal, Venmo, Block (Square), Zelle, and Cash App make it easy to pay individuals or businesses online and in an instant.
- **Personal finance apps** such as Mint, YNAB, and Quicken Simplifi let you see all of your finances in one place, set budgets, pay bills, and so on.
- **Peer-to-peer (P2P) lending** platforms like Prosper Marketplace, LendingClub, and Upstart allow individuals and small business owners to

receive loans from an array of individuals who contribute microloans directly to them.

- **Crypto apps**, including wallets, exchanges, and payment applications, allow you to hold and transact in cryptocurrencies and digital tokens like Bitcoin and non-fungible tokens (NFTs).
- **Insurtech** is the application of technology specifically to the insurance space. One example would be the use of devices that monitor your driving in order to adjust auto insurance rates.

Does fintech apply only to banking?

No, While banks and startups have created useful fintech applications around basic banking (e.g., checking and savings accounts, bank transfers, credit/debit cards, and loans), many other fintech areas that have more to do with personal finance, investing, or payments (among others) have grown in popularity.

How do fintech companies make money?

Fintechs make money in different ways depending on their specialty. Banking fintechs, for example, may generate revenue from fees, loan interest, and selling financial products. Investment apps may charge brokerage fees, utilize payment for order flow (PFOF), or collect a percentage of assets under management (AUM). Payment apps may earn interest on cash amounts and charge for features like earlier withdrawals or credit card use.

Trade on the Go. Anywhere, Anytime

One of the world's largest crypto-asset exchanges is ready to the people. Enjoy competitive fees and dedicated customer support while trading securely. The users also have access to Binance tools that make it easier than ever to view the trade history, manage auto-investments, view price charts, and make conversions with zero fees. Make an account for free and join millions of traders and investors on the global crypto market.

1.2.2 Financial disruption

Financial technology disruption is a massive shift in the banking service, from traditional banking to neobanks. Beyond offering banking services, neobanks have also helped users invest in stocks & crypto–niche, creating a platform for stock trading that traditional financial institutions are unwilling to try.

Since their heavy reliance on technology makes them prone to cyberattacks. Financial technology has introduced some noteworthy trends like blockchain, and other cybersecurity innovations as a response.

1. Customer experience is an essential component of the digital customer journey

Digital experience is nothing new, but its significance in the banking industry is only starting to emerge. For example, digital customer experience no longer refers to simply having an app or a web portal - that's yesterday's news! Today's consumers expect a seamless and personalized customer journey across all channels, no matter how they choose to interact with their bank (e.g., mobile app or website).

To keep up with the competition, banks need to expand their digital banking channels. This includes offering a wide range of options for customers who want to bank online or via mobile devices. Banks that neglect this area will quickly find themselves losing market share.

Banks no longer have a choice but to embrace this new way of doing business and find ways to improve upon their current processes so that customers receive better service, more personalized attention from staff, and a more streamlined overall experience.

2. Digital journeys are the new normal

Continuation of the previous trend, the digital journey is another important area of focus when it comes to digital disruption in banking. This refers to how customers interact with their bank and move through its various channels in a continuous, seamless way.

A successful digital journey must be intuitive, easy to use, and fast. Customers should not have to jump through hoops or spend a lot of time trying to find what they need. They should accomplish their goals quickly and easily, no matter which channel they are using.

3. Growing demand for payments

Another key area of digital disruption in banking is mobile payments. As the use of mobile devices continue to increase, banks need to find ways to capitalize on this trend by offering great mobile payment options.

Banks need to find new ways of making mobile payments more convenient for their customers so that they no longer have any reason to go to a physical bank branch. This means offering mobile payments that are not only secure but also easy to use.

In addition, banks should explore new ways of using mobile devices for payments. For example, they could allow customers to make in-app purchases or even pay bills with their smartphones.

The goal is to make mobile payments so convenient that customers will no longer want to use any other payment method.

4. Accelerated digital transformation with no-code development

Digital native banks have an advantage over traditional ones because they weren't built with legacy systems or processes in mind. But traditional institutions can catch up.

In order to keep up with the ever-changing digital landscape, banks need to embrace no-code development. This approach allows businesses to create custom applications without writing any code. Banks can quickly and easily create custom solutions that meet their specific needs with no-code development.

No-code platforms are helping to level the playing field between traditional banks and FinTechs. The benefit of this is that no matter what size your bank may be, it will no longer rely exclusively on an IT department for developing customer-facing applications. This also makes it easier for banks to stay ahead of the curve

and adapt quickly as new trends emerge, which is becoming increasingly important in today's world where no one knows what tomorrow will bring.

Citizen developers are able to pitch in and deliver digital journeys and accelerate digital transformation. This democratization process makes for a more competitive market where smaller companies can compete with larger ones.

5. Artificial intelligence applications

Artificial intelligence (AI) is another hot topic for digital disruption in banking. Banks are starting to use AI to improve areas such as customer service and fraud detection. As AI technology evolves, banks will undoubtedly find even more ways to incorporate it into their operations.

There are multiple areas of application of AI technology in banking: Customer service

Banks can use AI to provide better customer service by anticipating customer needs and providing recommendations. For example, a bank could use AI to recommend products or services based on a customer's past transactions.

Fraud detection

Banks can use AI for fraud detection by identifying fraudulent activities and patterns. This helps to protect customers and the bank from fraud.

Payment processing

Banks can use AI to process payments and transactions faster than ever before. This allows them to provide better service with no delays in payment processing times or errors due to human error because no one is involved!

Virtual customer assistants (VCAs)

VCAs offer a number of benefits, including improved customer service and increased efficiency. Banks that neglect this area will quickly find themselves losing market share.

6. Moving to the cloud while balancing the risks

Banks were hesitant to move to the cloud because of the security risks involved. However, cloud providers have taken steps to ensure that their solutions are secure. In addition, banks can take additional measures such as implementing two-factor authentication and using encryption to protect their data.

Banks only recently started moving to the cloud, but this trend is quickly gaining steam as banks are looking to completely transform how they have done business over the last few decades as they face fierce competition from FinTechs that are not weighed down by legacy systems. Traditional banks are looking to replicate this, and as agility and speed are key, they can only compete by moving to the cloud.

Cloud-based solutions offer a number of advantages for banks, including:

- **Cost savings:** Banks can save money by moving to the cloud. This is because they no longer need to invest in hardware or software and can instead use the cloud provider's infrastructure.
- **Speed and agility:** Banks can quickly adopt new technologies and processes using the cloud rather than building them from scratch.
- **Scalability:** Banks can quickly scale up or down as their needs change, thanks to the flexibility offered in today's cloud solutions. This allows them to focus on their core business and not worry about how IT will respond when demand increases for services like banking.

While there are some risks associated with moving to the cloud, the benefits far outweigh them, and banks should not hesitate in making this transition.

Moving to the cloud is not just about cost savings and efficiency improvements. It also allows banks to quickly adopt new technologies and processes using the flexibility provided by today's cloud solutions, which means no more waiting around for IT departments or developers who are bogged down with legacy systems.

8. The Internet of Things and data protection

The Internet of Things (IoT) is another trend that banks need to pay attention to. With the IoT, devices are connected and able to communicate with each other. This opens up a world of possibilities for banks, which can use the IoT to improve their operations and provide better customer service.

For example, banks can use sensors to monitor and track the conditions in their real-estate assets in real-time. This allows them to improve efficiency by knowing the current status at all times.

The IoT also enables banks to provide better customer service by collecting data from devices that customers use every day, empowring them to understand how their clients live and what they need to tailor products accordingly.

However, this data must be protected. Banks need to ensure that no one has access to the data except for those who have permission, which means they'll need strong encryption methods and other security measures in place.

Data privacy and protection are quickly becoming one of the most important issues in our society. Banks need to ensure that they are doing everything possible to protect their customers.

9. Digital data collection and data analytics

There is a saying, "garbage in, garbage out," which means that your insights are only as good as the quality of your raw data. To ensure that the data is accurate, it needs to be validated at the point of entry, meaning that no data should be entered manually without being validated by an automated process. This can be done through machine learning algorithms and other technologies.

Once the data is validated, banks will need high-quality storage solutions for all their information, so it's accessible when needed. They should also have a plan in place to ensure that no one else has access except those who have permission from management or the board of directors.

The data needs to be protected from cyber attacks and theft, which means using strong encryption methods as well as other security measures.

10. Robotic process automation

Another area where banks are seeing digital disruption is robotic process automation (RPA). RPA allows businesses to automate tasks that were once done manually. This can save banks time and money and improve the accuracy of their operations.

RPA is not a replacement for human workers; in fact, it's meant to free up employees so they can focus on more important tasks. It also improves productivity by removing repetitive tasks from the equation, allowing people to get their work done faster and with fewer errors.

However, RPA is no silver bullet either: there are some tasks that can't be automated, and banks will still need human employees to do those tasks. It's important for banks to find the right balance between automation and human workers in order to get the most out of both technologies.

1.2.3 Digital Financial Revolution

Digital finance has emerged as a game changer in the financial services industry, disrupting traditional models of banking and payments. In India, the rapid growth of internet and smartphone penetration has led to a boom in the digital finance industry, with a number of startups and established players leveraging technology to offer innovative financial products and services. This blog post provides an overview of the digital finance industry in India, its growth drivers, opportunities and challenges.

Growth Drivers

1. Government Initiatives

The Indian government's push towards digitalisation has been a major driver of the growth of the digital finance industry. Initiatives such as Digital India, Jan Dhan Yojana, and Aadhaar have created a digital infrastructure that allows for seamless and secure transactions.

2. Growing Smartphone and Internet Penetration

India has seen a significant increase in smartphone and internet penetration in recent years, which has enabled the adoption of digital financial services.

3. Favourable Regulatory Environment

The Reserve Bank of India has been proactive in regulating the digital finance industry, ensuring a level playing field for all players while also protecting consumers.

Opportunities

1. Financial Inclusion

Digital finance has the potential to provide financial services to the large unbanked and underbanked population in India. With the use of technology, financial services can be delivered to even the remotest areas of the country, thereby promoting financial inclusion.

2. Access to Credit

Digital finance has the potential to democratise access to credit, particularly for small and medium enterprises. With the use of alternative data sources, such as social media and digital footprints, lenders can make credit decisions based on a borrower's creditworthiness rather than just their credit history.

3. Cost Efficiency

Digital finance has the potential to significantly reduce the cost of financial services, as it eliminates the need for physical infrastructure and personnel. This, in turn, can lead to lower consumer fees and charges.

Challenges

1. Security and Fraud

The digital finance industry is vulnerable to security threats and fraud, which can erode consumer confidence. Ensuring the security of transactions and data is, therefore, critical for the industry's success.

2. Digital Divide

While smartphone and internet penetration has increased significantly in India, there is still a significant digital divide between urban and rural areas. This can limit the reach of digital financial services to certain sections of the population.

3. Competition

The digital finance industry is highly competitive, with a large number of players vying for market share. This can lead to aggressive marketing and pricing strategies, which can have an impact on the overall profitability of the industry.

4. New Era of Banking

In an era defined by rapid technological advances and an ever-evolving regulatory landscape, the need for banking institutions to remain both competitive and compliant has never been more critical. Much of this is driven from current economic headwinds and rising operational costs, which have created new pressures for banks.

In response to such challenges, the last few years have seen the industry witness exponential growth in two areas: ‗life-centric banking' built around operationalising customer needs, and niche digital banks catering to specific demographics. More than anything, adapting and innovating in this transformative era is crucial for banks to overcome challenges and stay profitable. So, what's fuelling this new era of transformation?

Harnessing the Power of Artificial Intelligence

Banks are increasingly leveraging the power of artificial intelligence (AI) to combat fraud, respond to evolving customer demands, and see off competition from smaller and more agile fintech rivals. By 2025, the banking sector is set to spend an extra $31 billion on embedding Artificial Intelligence (AI) into existing systems. This alone shows us how indispensable AI technologies are becoming to the world of banking.

For instance, adopting advanced AI algorithms, large language models, and customer ML models -streamed through intelligent document processing solutions — will be crucial for helping banks better unlock ‗dark data' and bring out value from unstructured data. They can uncover previously unrecognised data points, expose errors, enhance fraud detection, improve customer service, and customise offerings to meet specific customer needs.

Banks are integrating AI-driven document processing solutions into their fraud detection systems. By leveraging large language models and advanced machine learning models, the bank‘s system automatically analyses transaction data, identifies suspicious patterns, and detects potential fraud in real-time. This improves the bank‘s ability to protect against fraudulent activities, ensuring the security of both the bank and its customers.

Elsewhere, AI-powered chatbots and virtual assistants undergo rigorous testing to ensure fairness and mitigate bias. These intelligent conversational agents provide personalised and unbiased customer support, empowering the bank to deliver exceptional service to all customers while future-proofing their AI strategies.

But to successfully leverage any of these innovations, banks need to build a comprehensive, enterprise-wide data strategy. Here, more banks are embracing — this refers to decentralized data architecture that organizes data by specific business domain. Rather than being stored centrally and owned by a single team, data ownership is distributed across various teams, each responsible for their own domain‘s data. This makes the data more accessible and valuable across an organisation.

Capturing The Elusive Gen Z

Across the board consumer demands are changing, and banks‘ priorities across consumer demographics are also shifting.

To that end, banks are acting swiftly. A number of traditional banks have begun embedding fintech services such as Banking as a Service (BaaS) which involves financial institutions opening their platforms to third-party providers, allowing them to offer banking services to customers. Whilst Buy Now, Pay Later platforms and similar solutions have continued to gain popularity with Gen Z consumers.

Embedded fintech signifies more than just a trend; it represents an age of integration and innovation. But while this approach brings many benefits, it also poses significant risks, particularly around data security and consumer protection. The shift towards such platforms therefore demands a seamless transition that is also compliant.

Creating a data-driven strategy

Creating a data strategy involves finding use cases, addressing legacy constraints, and investing in capabilities to support current and future needs. For example, intelligent document processing and content service platforms can help banks extract valuable insights from vast customer and financial data. Further, automating and streamlining processes can reduce manual inputs, speed up processing, and provide a comprehensive view of operational insights through intuitive dashboards.

Partnering and integration is also key to success. Leveraging data is crucial for long-term competitiveness and requires agility and collaboration with third parties, empowering customers with tailored financial solutions. Working with specialists — whether a cloud or fintech provider, or a trusted technology partner — can help unlock the benefits of transformation even more efficiently, deliver a faster return on investment and help banks painlessly reach their desired business outcomes.

Banking regulation thresholds continue to change frequently — these can be complex to navigate and even more difficult to implement. However, to succeed in this changing landscape, banks will need to be prepared to adapt to new technologies and innovate their processes and offerings.

Pursuing a digital transformation shouldn‘t merely be an option, but a business imperative. And above all, banks should be ready to embrace innovative data practices to empower customers in their financial journeys, now and in the future.

Ultimately, the need for stability and resilience in the current economic climate doesn‘t have to be at odds with investment in innovation. Stability and working with trusted organisations will be guiding principles for all banks across the globe.

Data Mesh Explanation: While the Data Mesh concept is introduced, there‘s an assumption that readers are familiar with it. A brief one-liner explanation could make it more accessible to a general audience.

In the section about Gen Z, the statement, —Once upon a time the older generation drove the trends and habits…‖ could be interpreted in various ways.

Consider specifying which older generation is being referred to or rephrase to something like —Historically, older generations set the trends and habits…

Let's Sum Up

Financial technology is used to describe new technology that seeks to improve and automate the delivery and use of financial services.

New technologies, such as machine learning/artificial intelligence (AI), predictive behavioral analytics, and data-driven marketing, will take the guesswork and habit out of financial decisions. —Learning‖ apps will not only learn the habits of users but also engage users in learning games to make their automatic, unconscious spending and saving decisions better. Fintechs make money in different ways depending on their specialty. Banking fintechs.

Financial technology disruption is a massive shift in the banking service, from traditional banking to neobanks. Digital finance has emerged as a game changer in the financial services industry, disrupting traditional models of banking and payments. In India, the rapid growth of internet and smartphone penetration has led to a boom in the digital finance industry, with a number of startups and established players leveraging technology to offer innovative financial products and services.

Banks are increasingly leveraging the power of artificial intelligence (AI) to combat fraud, respond to evolving customer demands, and see off competition from smaller and more agile fintech rivals.

CHECK YOUR PROGRESS – QUIZ- 2

1. Fintech, a term combining "financial" and "technology," most commonly refers to:
    a. Traditional banking practices
    b. Innovative financial services and solutions enabled by technology
    c. Government financial policies
    d. Manual accounting systems
2. Fintech is primarily characterized by the use of which of the following to enhance financial services?
    a. Traditional accounting methods
    b. Advanced technologies

c. Manual banking procedures

d. Government policies

3. Which of the following best describes a key driver of the digital financial revolution?

a. Increased bank branch networks

b. Advancements in mobile technology and internet access

c. Rising use of paper checks

d. Decreased interest in digital platforms

4. What is the main goal of Fintech companies in the financial sector?

a. Maintain traditional banking methods

b. Disrupt and improve traditional financial services through innovation

c. Limit access to financial services

d. Increase physical bank locations

5. Which technology is considered a major disruptor in the Fintech industry due to its ability to provide secure and transparent transactions?

a. Cloud Computing

b. Blockchain

c. Fax Machines

d. Landline Telephones

Answers :

1. b. Innovative financial services and solutions enabled by technology
2. b. Advanced technologies
3. b. Advancements in mobile technology and internet access
4. b. Disrupt and improve traditional financial services through innovation
5. b. Blockchain

SECTION 1.3: NEW ERA OF BANKING

1.3.1 Digital Banking

Digital Banking means automating conventional banking through digital platforms like the web and internet-enabled systems like mobile devices. With Digital Banking, they can access almost all financial services at the tip of your fingers, all year round, irrespective of national or bank holidays. It entirely eliminates the need for you to visit the bank.

Digital Banking – Features and Benefits

Compared to traditional banking, which requires to visit the bank for every big and small transaction, they can conduct digital banking services from any corner of the world. Here are some of its best features and benefits.

1. Convenient remote banking platforms

People may access the bank account digitally via internet banking or eponymous mobile apps of the bank, thatthey download on their smartphone to access their account anytime.

2. Easy on boarding

People can now complete the account opening and the subsequent KYC process online and digitally via a video call. The Reserve Bank of India has permitted banks to conduct a Video KYC to open a bank account on par with a full KYC bank account.

3. Speedy fund transfers

Digital Banking comes with a host of online fund transfer provisions. People can transfer any sum of money to any bank account in India via NEFT, IMPS, RTGS or UPI or make overseas wire transfers.

4. Time-saving auto-debit facility

People can recharge your mobile and DTH subscriptions online and enable auto-payment facilities. People can also pay off outstanding credit card dues by setting up the auto-debit facility.

5. **Faster utility bill payments**

People can also consolidate all their utility bills and set up billers instead of bothering with physical bill payments by logging in on the internet or mobile banking platforms of their bank to complete the payments.

6. **Quick investment solutions**

People can easily open fixed and recurring deposits, buy insurance, make investments or apply for loans on digital banking platforms.

7. **24x7 account tracking**

People can check your account balances and get mini statements. They can just as easily monitor their transactions and sign up for SMS alerts and notifications after every transaction by registering their mobile number with the bank.

8. **Convenient online shopping facilities**

People can pay for expenses on online shopping websites via net banking or by entering your debit card details like card number, expiration date, and CVV and authenticating payments via OTP.

1.3.2 Electronic Payment Systems

An **Electronic Payment System** is defined as a mode of payment over an electronic network,such as the Internet. The Indian economy has developed at a rapid pace since the growth of e-commerce, electronic payments, and digital payments have gone a long way. Electronic payments have been rising since the implementation of demonetization and will continue to do so with the current government ensuring that these types of payments are promoted.

Electronic Payment System allows people to make online payments for their purchases ofgoods and services without the physical transfer of cash and cheques, irrespective of time andlocation. The key components of this payment system are the payers and payees, financialinstitutions, electronic devices, communication networks, payment gateways, and mobilepayment apps. As the global economy continues to evolve, the dependency on physical modesof payment is gradually giving way to digital alternatives that offer speed, convenience, andefficiency. These systems facilitate a diverse range of financial activities, from onlinepurchases and bill payments to person-to-person transfers.

Types of Electronic Payment System

India, being the fastest-growing economy and a developing nation, has witnessed significant growth in various types of Electronic Payment Systems, driven by technological advancements and efforts to promote a cashless economy. The prominent types of Electronic Payment Systems in India range from the Unified Payments Interface (UPI) to Debit and Credit cards. Listed below are the types of Electronic Payment Systems:

1. Unified Payments Interface (UPI):

UPI has become a widely adopted and popular electronic payment system in India. It enables users to link multiple bank accounts to a single mobile application, allowing seamless and instant fund transfers between individuals and merchants.

2. Mobile Wallets:

Mobile Wallet services like Paytm, PhonePe, and Google Pay have gained widespread acceptance. Users can load money into these digital wallets and use the balance for various transactions, including mobile recharge, bill payments, and online shopping.

3. Debit and Credit Cards:

Debit and Credit card usage is prevalent in India, with various banks issuing these cards for electronic transactions. Cards are commonly used for Point-of-Sale (POS) transactions, online purchases, and cash withdrawals from ATMs.

4. Immediate Payment Service (IMPS):

IMPS enables instant interbank electronic fund transfers through mobile phones, internet banking, or ATMs. It is particularly useful for peer-to-peer transactions and small-value payments.

5. National Electronic Funds Transfer (NEFT):

NEFT is a nationwide electronic payment system that facilitates one-to-one funds transfer between bank accounts. It operates on a deferred settlement basis and is widely used for both individual and corporate transactions.

6. Real-Time Gross Settlement (RTGS):

RTGS is another electronic fund transfer system that allows real-time settlement of large-value transactions. It is typically used for high-value interbank transfers.

7. Prepaid Instruments:

Prepaid Instruments, including prepaid cards and gift cards, provide users with a convenient way to make electronic payments with a pre-loaded amount.

Advantages of Electronic Payment System

1. **24/7 accessibility:** Electronic Payments can be made at any time, providing round-the-clock access to financial transactions.
2. **Global Accessibility:** Users can make payments and transfer funds globally without being restricted by geographical boundaries.
3. **Instant Transactions**: Electronic Payments are processed quickly, allowing for near-instantaneous transfer of funds between accounts.
4. **Faster Settlement:** Compared to traditional payment methods, electronic transactions often result in faster settlement times.
5. **Record-Keeping and Tracking:** Electronic Payment Systems facilitate easy record-keeping for both businesses and individuals.
6. **Encryption and Authentication:** Electronic Payment Systems employ robust encryption and authentication protocols to secure transactions and protect sensitive information.

Disadvantages of Electronic Payment System

1. **Security Concerns:** Electronic Payment Systems are susceptible to security breaches, including hacking, phishing, and identity theft.
2. **Technical Issues**: Electronic Payment Systems rely on technology, and technical glitches or system failures can disrupt transactions.

3. **Fraud Risk:** Despite security measures, Electronic Payment Systems are not immune to fraud. Unauthorized transactions, stolen credentials, or fraudulent activities can occur, leading to financial losses for individuals and businesses.

4. **Privacy Concerns**: Users may be concerned about the collection and storage of personal information by electronic payment providers.

5. **Transaction Fees**: Some electronic payment systems impose transaction fees, which can add up over time.

Regulatory Bodies Governing Electronic Payment System in India

1. The Regulatory Framework for the Electronic Payment System in India is governed by the **Reserve Bank of India** and other relevant authorities. The Reserve Bank of India has the authority to oversee and regulate payment and settlement systems.

2. The **Payment and Settlement Systems Act, 2007** provides the legal framework for the regulation and supervision of payment systems in India.

3. The **National Payments Corporation of India (NPCI)** issues guidelines for the UPI. The Information Technology Act, 2000, provides a legal framework for electronic transactions and addresses issues related to electronic governance.

4. The **Securities and Exchange Board of India (SEBI**) regulates securities and capital markets, and it also regulates electronic payments where security transactions are involved.

5. The **Ministry of Finance,** through its various departments, provides overarching policy direction and guidance related to the financial sector, including Electronic Payment Systems.

6. The **Department of Telecommunication** oversees the Telecommunications sector, and its regulations impact mobile-based electronic payment services. Mobile network operators and telecom service providers are subject to the regulations set by the DoT.

7. The **Insurance Regulatory and Development Authority of India (IRDAI)** regulates the insurance sector in India. In the context of electronic payments, it may have oversight over the insurance-related transactions conducted through digital payment systems.

Regulations Relating to Electronic Payment System

1. Reserve Bank of India (RBI)

The RBI plays a central role in regulating EPS in India through various guidelines and frameworks:

- **Payment and Settlement Systems Act, 2007:** This legislation provides the legal foundation for the regulation and oversight of payment systems in India. It empowers the RBI to supervise and regulate the functioning of EPS to maintain financial stability and consumer protection.
- **Guidelines on Prepaid Payment Instruments (PPIs):** The RBI issues guidelines that govern the issuance and operation of prepaid payment instruments, including digital wallets and prepaid cards. These guidelines outline parameters, such as issuance limits, reload limits, and Know Your Customer (KYC) requirements.
- **Unified Payments Interface (UPI):** The RBI regulates UPI, a real-time payment system, through guidelines that cover transaction limits, security protocols, and dispute resolution mechanisms. UPI has emerged as a popular channel for peer- to-peer and merchant transactions.

2. National Payments Corporation of India (NPCI)

- **Operational Guidelines:** NPCI develops and enforces operational guidelines for payment systems it manages, including UPI, Immediate Payment Service (IMPS), and Bharat Bill Payment System (BBPS). These guidelines ensure standardized and secure operations.
- **Security and Risk Mitigation Measures:** NPCI implements security measures and risk mitigation strategies to safeguard electronic transactions.

These measures include encryption standards, two-factor authentication, and continuous monitoring for potentially fraudulent activities.

3. Other Regulatory Bodies

Several other regulatory bodies also have a role in governing EPS

- **Securities and Exchange Board of India (SEBI)**: SEBI, while primarily focused on securities market regulations, may have implications for EPS, especially in areas related to digital wallets and financial instruments.
- **Insurance Regulatory and Development Authority of India (IRDAI):** IRDAI oversees the insurance sector, and regulations related to EPS in insurance transactions may fall under its purview.
- **Consumer Protection Regulations**: Consumer protection regulations, focusing on transparency, disclosure, and dispute resolution, impact EPS to safeguard user interests.
- **Data Protection and Privacy Laws**: The introduction of data protection laws, such as the Personal Data Protection Bill, addresses concerns related to the handling and protection of user data within EPS. These regulations collectively form a robust framework, ensuring the secure and efficient functioning of electronic payment systems in India. It‘s important to stay updated on any amendments or new regulations introduced by these regulatory bodies.

1.3.3 Electronic Fund Transfer

Introduced in 1990 by the Reserve Bank of India (RBI), Electronic Fund Transfer (EFT) is the transfer of funds via electronic channels. EFT allows intra-bank and inter-bank transfers in a time-saving and cost-effective manner. Today, EFT has been replaced by a more efficient payment system — the National Electronic Fund Transfer, widely known as NEFT.

Electronic funds transfer (**EFT**) is the electronic transfer of money from one bank account to another, either within a single financial institution or across multiple institutions, via computer -based systems, without the direct intervention of bank staff.

According to the United States Electronic Fund Transfer Act of 1978 it is "a funds transfer initiated through an electronic terminal, telephone, computer (including on-line banking) or magnetic tape for the purpose of ordering, instructing, or authorizing a financial institution to debit or credit a consumer's account".

EFT transactions are known by a number of names across countries and different payment systems. For example, in the United States, they may be referred to as "electronic checks" or "e-checks". In the United Kingdom, the term "BACS Payment", "bank transfer" and "bank payment" are used, in Canada, "e-transfer" is used, while in several other European countries "giro transfer" is the common term.

How Does Electronic Fund Transfer Work?

With the Electronic Fund Transfer System, the online fund transfer is helmed by a few crucial parties. These include the sending bank, the sending service branch, the sending EFT centre, the receiving EFT centre, and the receiving service branch at the beneficiary bank. The below steps explain how EFT works.

1. The beneficiary place a fund transfer request in your bank.
2. The sending bank consolidates all such fund transfer requests and sends them to the service branch.
3. The service branch transmits data to the EFT – the National Clearing Cell (NCC), which is an automated clearinghouse.
4. The NCC transmits the EFT data to another NCC on the receiver end.
5. The receiving NCC processes the data and forwards it to the beneficiary bank.
6. The bank branch credits the beneficiary account on the same business day of receiving the transfer request.

Benefits of EFT System

Having explained EFT meaning in banking, let us examine its many noteworthy benefits. The most apparent ones are as under:

24 x 7 Availability

The beneficiary can place an EFT request 24x7x365. The RBI notifies banks and customers in case services are halted.

Real-Time Transfers

EFT enables you to send funds to beneficiary accounts on a real-time basis.

Nation-wide accessibility

Since most banks are EFT-enabled, the process of transferring funds to any corner of the country has now become hassle-free.

Zero Cost

The RBI does not levy fees on banks for EFT. Banks, too, pass on this benefit to their customers for online ETF services but may impose nominal charges for offline ETF payments.

Versatile Payment System

EFT is limited not only to fund transfers, but you may also use this facility to pay your credit card dues and loan EMIs, initiate inward foreign remittances and so on.

Let's Sum Up

Digital Banking means automating conventional banking through digital platforms like the web and internet-enabled systems like mobile devices.

An **Electronic Payment System** is defined as a mode of payment over an electronic network, such as the Internet. The Indian economy has developed at a rapid pace since the growth of e-commerce, electronic payments, and digital payments have gone a long way.

The RBI plays a central role in regulating EPS in India through various guidelines and frameworks.

NPCI develops and enforces operational guidelines for payment systems it manages, including UPI, Immediate Payment Service (IMPS), and Bharat Bill Payment System (BBPS). These guidelines ensure standardized and secure operations.

SEBI, while primarily focused on securities market regulations, may have implications for EPS, especially in areas related to digital wallets and financial instruments.

IRDAI oversees the insurance sector, and regulations related to EPS in insurance transactions may fall under its purview.

Electronic funds transfer (EFT) is the electronic transfer of money from one bank account to another, either within a single financial institution or across multiple institutions, via computer -based systems, without the direct intervention of bank staff.

CHECK YOUR PROGRESS – QUIZ - 3

1. Which of the following is not true about the National Electronic Funds Transfer (NEFT) system?

a. There is no limit on transaction through NEFT

b. NEFT operates in hourly batches

c. NEFT is a payment system that facilitates one-to-one funds transfer

d. Only bank branches that are NEFT enabled can be a part of the NEFT funds transfer network.

2. What is an e-payment system?

a. A system for exchanging physical currency

b. A method of making transactions electronically

c. A platform for online auctions

d. A type of cryptocurrency

3. What is a disadvantage of using e-payments?

a. Potential security risks and hacking

b. Faster transaction times

c. Lower transaction fees

d. Increased anonymity

4. What is a key characteristic of electronic payment in e-commerce?

a. It involves paperless monetary transactions.

b. It requires physical presence at a bank.

c. It is more time-consuming than manual processing.

d. It limits market reach for businesses.

5. Expansion of EFT_____

a. Electronic Fund Transfer

b. Economic Fund Transfer.

c. European Fund Transfer

d. Electric Fund Transfer.

Answers :

1. b. NEFT operates in hourly batches
2. B. A method of making transactions electronically
3. A. Potential security risks and hacking
4. A. It involves paperless monetary transactions
5. A. Electronic Fund Transfer

SECTION 1.4: ELECTRONIC CREDIT AND DEBIT CLEARING

1.4.1 Electronic Credit and Debit Clearing

Electronic Clearing Service (ECS) is a method of electronically transferring funds between bank accounts. ECS in banking is generally used by large organisations for repetitive bulk transactions, such as bank transfer of salaries, dividends, interest payments, loan repayments, and pensions to name a few.

Typically, the ECS transactions take place between a single user account (payer) and a large number of destination accounts (payees). However, the Electronic Clearing System can also be used to settle utility bills and other regular payments, such as equated monthly installments (EMIs) for loans and systematic investment plans (SIPs).

Electronic Clearing Service is classified into two types – ECS credit and ECS debit:

1. ECS Credit

When a bank makes a credit to another bank account, say to pay a salary or dividends, it is known as ECS credit. In this case, a single bank account is debited and the money is credited to multiple other accounts.

Advantages of ECS Credit

- If you subscribe to this mandate, you will always receive your payments on a fixed date, thereby eliminating unpredictability
- Those who use the ECS credit mandate can save on administrative charges, such as cost of printing, cost of dispatch, cost of buying papers, etc.
- Subscribers of this facility can eliminate their need for visiting banks, thereby helping you save time and effort
- You can avoid administrative delays and processing bottlenecks, problems that are often associated with paper instruments

How Does ECS Credit System Work?

ECS Credit is typically used by institutions or organisations that have to make repetitive bank transfers to a large number of beneficiaries. However, note that an ECS subscriber must first register themselves with an approved clearing house, such as the National Automated Clearing House (NACH) and obtain approval or consent of the beneficiaries, who will receive payments through an ECS mandate. To register with a clearing house, the ECS user must first provide it with the account particulars of the beneficiaries. Usually a due date is fixed on which the clearing house debits the ECS subscriber‘s bank account and transfers the amount to the various beneficiary accounts.

ECS Debit

ECS Debit is typically used by utility service providers, among others, to collect payments from a large number of customers, generally on a recurring basis. Once an ECS Debit mandate is set up, the payee can receive payments on a fixed date automatically. It is also convenient for the payers, which in this case, are mostly customers because they don‘t have to manually make payments.

However, in order to use this facility, a user must provide their consent and authorise the payee to debit their accounts on a specified date on a periodic basis. Once the ECS mandate or authorisation is provided, the payee can use the ECS system to transfer money from the customer‘s account to their own bank accounts.

Advantages of ECS Debit

- ECS debit can help users eliminate the hassle of actively tracking due dates or payment deadlines. Once set up, transactions happen automatically on or before the due date, thereby also helping the user avoid late payment fees or other forms of penalty.
- It eliminates the need for maintaining physically tracking or delivering paper instruments, such as cheques, which saves both money and time.
- ECS debit systems are highly secure and the transactions are always encrypted. This minimises chances of fraud.
- For the recipient, it eliminates the need for tracking each payment individually as the system ensures that money is collected and transferred to the beneficiary account on a single date.

Advantages of ECS

1. For Financial Institutions

1. Paperwork has been reduced significantly as a result of ECS.
2. Once the Electronic Clearing Service is activated, all banks need to do is match key details, such as name and account number and then credit the amount.
3. The process is aborted if the customer‘s details do not match.
4. Every transaction gets recorded.

2. For Customers

1. The sum is transferred within 3-4 working days.
2. There is no need to visit a bank physically and sign monthly cheques or issue other paper instruments to pay the dues.
3. The possibility of fraud has been greatly reduced since ECS systems use encrypted data.

3. For Organisations and Institutions

1. Businesses and large institutions often need to make recurring payments to a large group of people. The Electronic Clearing Service (ECS) ensures that the transfer is completed in a timely and seamless manner.
2. Organisations can save big on printing, delivery charges, and other costs associated with paper-based payment systems.

1.4.2 National Electronic Funds Transfer (NEFT)

The full form of NEFT is National Electronic Funds Transfer. It is an online payment system facilitating one-to-one fund transfers. You can use NEFT to transfer funds electronically from your bank account to that of another person. But you must remember an important factor- NEFT transfers don‘t occur in real time.

Differences between NEFT, RTGS and IMPS: Limit, charges, timings, full form

Technology has made the process of transferring money much easier and quicker, previously, people had to rely on cheques and other offline methods for fund transfer that could take several days. Now, financial institutions, private companies and government institutions have adopted online payment and settlement methods, which are much faster.

NEFT, RTGS and IMPS are the most commonly used methods of online fund transfer in our country today, while the Reserve Bank of India (RBI) introduced NEFT and RTGS, the National Payment Corporation of India (NPCI) introduced IMPS.

Features of Payment systems

1. Fund transfer limit

Fund transfer limit means the minimum and maximum amount that can be transferred via a payment system. The amount allowed by NEFT, RTGS and IMPS differs.

2. Service Availability

Certain payment systems are available 24x7, while for others, users have to abide by specific timings. Remitters can initiate fund transfers anytime using these payment systems, but funds are settled only when the service is made available.

3. Fund transfer charges

Fund transfers have certain charges as decided by the financial institution. Fund transfer changes depend on the transfer speed, amount to be transferred and other terms of a financial institution.

4. Fund settlement speed

Fund settlement speed refers to the time required to settle the transfer of money from one account to another after it has been initiated.

1.4.2 RTGS

The full form of RTGS is Real-Time Gross Settlement. The online payment system to transfer money, the amount will get credited to the beneficiary‘s account in real time.

IMPS

The full form of IMPS is Immediate Mobile Payments Services. This online payment system facilitates inter-bank funds transfer system in real-time. An important factor to note is that use IMPS 24x7 throughout the year, including bank holidays.

1.4.3 VSAT

A very-small-aperture terminal (VSAT) is a two-way satellite ground station with a dish antenna that is smaller than 3.8 meters. The majority of VSAT antennas range from 75 cm to 1.2 m. Bit rates, in most cases, range from 4 kbit/s up to 16 Mbit/s. VSATs access satellites in geosynchronous orbit or geostationary orbit to relay data from small remote Earth stations (terminals) to other terminals (in mesh topology) or master Earth station "hubs" (in star topology).

VSATs are used to transmit narrowband data (e.g., point-of-sale transactions using credit cards, polling or RFID data, or SCADA), or broadband data (for the provision of satellite Internet access to remote locations, VoIP or video). VSATs are

also used for transportable, on-the-move (utilising phased array antennas) or mobile maritime communications.

1.4.4 SFMS

Structured Financial Messaging System (**SFMS**) is a secure messaging standard developed to serve as a platform for intra-bank and inter-bank applications. It is an Indian standard similar to SWIFT which is the international messaging system used for financial messaging globally.

SFMS can be used for secure communication within the bank and between banks. The SFMS was launched on December 14, 2001 at IDRBT. It allows the definition of message structures, message formats, and authorization of the same for usage by the financial community. SFMS has a number of features and it is a modularised and web enabled software, with a flexible architecture facilitating centralised or distributed deployment. The access control is through Smart Card based user access and messages are secured by means of standard encryption and authentication services conforming to ISO standards.

The intra-bank part of SFMS is used by banks to take full advantage of the secure messaging facility it provides. The inter-bank messaging part is used by applications like electronic funds transfer (EFT), real time gross settlement systems (RTGS), delivery versus payments (DVP), centralised funds management systems (CFMS) and others. The SFMS provides application program interfaces (APIs), which can be used to integrate existing and future applications with the SFMS. Several banks have integrated it with their core or centralised banking software.

SWIFT code

A SWIFT code - also known as a SWIFT/BIC or a SWIFT number - is a unique identifier which helps banks processing international payments deliver money across the globe. It tells the banks which process the payment which institution the recipient's account is with, the country the account is held in, and the branch location.

SWIFT code example

SWIFT codes are laid out in a standard format. You'll find 8 letters or digits for a standard SWIFT code, or 11 if you also have the branch code added. The last 3 digits which show the specific branch an account is held at are not always necessary.

Let's Sum Up

Electronic Clearing Service (ECS) is a method of electronically transferring funds between bank accounts.

When a bank makes a credit to another bank account, say to pay a salary or dividends, it is known as ECS credit.

ECS Debit is typically used by utility service providers, among others, to collect payments from a large number of customers, generally on a recurring basis.

National Electronic Funds Transfer (NEFT) is an online payment system facilitating one-to-one fund transfers.

Real-Time Gross Settlement (RTGS) is online payment system to transfer money, the amount will get credited to the beneficiary‘s account in real time.

VSATs are used to transmit narrowband data (e.g., point-of-sale transactions using credit cards, polling or RFID data, or SCADA), or broadband data (for the provision of satellite Internet access to remote locations, VoIP or video). VSATs are also used for transportable, on-the-move (utilising phased array antennas) or mobile maritime communications.

Structured Financial Messaging System (**SFMS**) is a secure messaging standard developed to serve as a platform for intra-bank and inter-bank applications. It is an Indian standard similar to SWIFT which is the international messaging system used for financial messaging globally.

A SWIFT code - also known as a SWIFT/BIC or a SWIFT number - is a unique identifier which helps banks processing international payments deliver money across the globe.

CHECK YOUR PROGRESS- QUIZ - 4

1. What is a significant benefit of using digital wallets?
   a. Increased use of cash transactions
   b. Enhanced convenience and speed of transactions
   c. Higher transaction fees
   d. Decreased security
2. **NEFT refers to**
   a. National Economic Fund Transfer
   b. National Economic Fund Transfer
   c. National Electronic Fee Transfer
   d. none of these
3. **IFSC stands for ……..**
   a. Indian Financial System Code
   b. International Financial System Code
   c. Indian Fund Service Code
   d. None of these
4. **RTGS stands for ……**
   a. Real Time Gross Settlement
   b. Real Term Gross Settlement
   c. Real Time Goal Settlement
   d. Real Term Goal Settlement
5. **SWIFT stands for ……..**
   a. Society for Worldwide Internet Financial Telecommunications
   b. Solution for Worldwide Interbank Financial Telecommunications
   c. Society for Worldwide Internet Financial Telecommunications
   d. Solution for Worldwide Interbank Financial Telecommunications

Answers :

1. Answer : B : Enhanced convenience and speed of transactions
2. Answer : D : none of these
3. Answer : A. Indian Financial System Code
4. Answer A. Real Time Gross Settlement
5. Answer : D. Solution for Worldwide Interbank Financial Telecommunications

UNIT SUMMARY

The banking sector is undergoing a profound transformation driven by technological advancements, evolving customer expectations, and regulatory changes. This new era of banking is characterized by digitalization, innovation, and a shift towards more customer-centric services.

Digital Transformation: At the heart of this evolution is digital transformation. Banks are leveraging technology to enhance their services, streamline operations, and improve customer experience. Online and mobile banking platforms have become essential, allowing customers to perform transactions, manage accounts, and access financial services anytime and anywhere. This shift has also led to the rise of digital-only banks, or "neobanks," which operate without physical branches and offer a range of services through mobile apps.

Fintech Innovation: Financial technology (fintech) companies are disrupting traditional banking models by introducing new ways to handle payments, lending, and investment. Innovations such as blockchain technology, peer-to-peer lending, and robo-advisors are reshaping the landscape. Banks are increasingly partnering with fintech firms to integrate these advanced solutions, enhancing their offerings and staying competitive.

Customer-Centric Services: Modern banking emphasizes personalized customer experiences. Data analytics and artificial intelligence (AI) enable banks to offer tailored financial products, predictive insights, and enhanced customer support. This shift towards personalization is driven by a desire to meet individual needs more effectively and foster greater customer loyalty.

Regulatory and Security Considerations: The new era also brings heightened regulatory scrutiny and a focus on cybersecurity. As banks adopt digital technologies, they must navigate complex regulations to ensure compliance and protect customer data. The emphasis on security is crucial to safeguarding against cyber threats and maintaining trust in the financial system.

Sustainable Banking: Additionally, there is a growing trend towards sustainable banking practices. Banks are increasingly incorporating environmental, social, and governance (ESG) criteria into their operations and investment strategies, reflecting a broader commitment to social responsibility.

In summary, the new era of banking is marked by digital innovation, a focus on customer-centric services, regulatory challenges, and a commitment to sustainability. These changes are redefining how banks operate and interact with their customers, setting the stage for a more dynamic and responsive financial industry.

SELF ASSESSMENT QUESTIONS

1. Discuss the evolution of banking from ancient times to the modern era.
2. Examine the impact of the establishment of central banks on the development of the modern banking system.
3. Analyze the role of fintech in transforming traditional banking. How have innovations like blockchain, cryptocurrencies, and mobile payments reshaped financial services and consumer behavior?
4. Evaluate the regulatory challenges and opportunities posed by fintech companies. What measures should be taken to balance innovation with financial stability and consumer protection?
5. Explore the concept of digital-only banks and their impact on the traditional banking sector.
6. Discuss the evolution of electronic credit and debit clearing systems. How have advancements in technology streamlined payment processing and enhanced transaction security?
7. Examine the implications of real-time payment systems on the banking industry and consumer behavior. How do these systems compare to traditional clearing methods in terms of speed, cost, and reliability?
8. Investigate the ways in which traditional banks are integrating fintech solutions into their services. How are partnerships between banks and fintech companies shaping the future of financial services?
9. Analyze the impact of regulatory technology (RegTech) on compliance and risk management in the banking sector. How is RegTech improving transparency and reducing operational risks for financial institutions?

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CONTEMPORARY DEVELOPMENTS IN BANKING

UNIT: II CONTEMPORARY DEVELOPMENTS IN BANKING

Distributed Ledger Technology — Block chain: Meaning - Structure of Block Chain - Types of Block Chain - Differences between DLT and Block chain - Benefits of Block chain and DLT - Unlocking the potential of Block chain –Crypto currencies, Central Bank Digital Currency (CBDC) - Role of DLT in financial services - AI in Banking: Future of AI in Banking - Applications of AI in Banking - Importance of AI in banking - Banking reimagined with AI. Cloud banking - Meaning - Benefits in switching to Cloud Banking

CONTEMPORARY DEVELOPMENTS IN BANKING

UNIT OBJECTIVES

Contemporary developments in banking reflect significant technological and regulatory advancements reshaping the industry. Digital transformation has revolutionized banking through online and mobile platforms, enhancing customer convenience and accessibility. Fintech innovations, including blockchain, artificial intelligence, and machine learning, are streamlining operations, improving risk management, and offering personalized financial services. Additionally, regulatory changes aim to enhance transparency, security, and consumer protection. The rise of digital currencies and evolving payment systems also mark key trends. These developments are driving greater efficiency, customer engagement, and competitiveness in the banking sector, shaping the future of financial services.

SECTION 2.1: INTRODUCTION TO CONTEMPORARY DEVELOPMENTS IN BANKING

2.1.1 Contemporary Development in Banking

Banking business has done wonders for the Indian economy. Indian banking is the lifeblood for the nation and people. Banking has helped in developing the vital sectors of the economy and usher in a new dawn of progress on the Indian horizon. Indian banking sector has translated the hopes and aspirations of millions of people into reality. India is one of the top 10 economies in the world, where the banking sector has tremendous potential to grow. The last decade saw customers embracing ATM, internet and mobile banking. India"s banking sector is currently valued at 81 trillion. It has the potential to become the fifth largest banking industry in the world by 2020 and the third largest by 2025.The structure of banking industry in India can be

mapped through the functions performed by banks associated with the economy. The face of Indian banking has changed over the years. Banks are now reaching out to the masses with technology to facilitate greater ease of communication, and transactions are carried out through the Internet and mobile devices.

Public Sector Banks

Public Sector banks are those in which the majority stake is held by the Government of India (Govt). They include the SBI and its associate banks and 19 other nationalise banks.

Private Sector Banks

In this type of banks, the majority of share capital is held by private individuals and corporate. The private bank includes the old private sector and new private sector banks.

Technology phase in customer services in banking

Technology Phase in Customer Services in Banking Extensive spread of bank branches and diversification of banking services in India over the past one decade presents different challenges in the areas of customer service, speedy disposal of credit proposals, reconciliation of inter-branch office transactions, productivity/profitability, better control and audit and management information system required for quick decision making. For meeting these emerging challenges it is essential to ensure branch level computerization or up gradation of technology and networking of the branches with their controlling office and the head office. The objectives of the RBI‟s response to those challenges facing the banking industry have been directed towards improvements and implementing an effective electronic network providing a robust, secure and reliable communication backbone for the banking system.

Computerizations in Customer Services

In today‘s competitive scenario speed and sophistication are the essentials of banking service. Here comes the value of computer technology, which is widely acknowledged to be the major enabling banking environment in the country. Computer technology is used not only to improve the operational efficiency, but also to change the very nature of banking. Bank computerization was started with the

signing of the mechanization agreement by the IBA with trade unions in the year 1983. The technology changes have put forth the competition among the banks. This has led to increasing total banking automation in the Indian banking industry. New private sector banks and foreign banks have an edge over public sector banks as far as implementation of technological solutions is concerned. However, the latter is in the process of making huge investment in technology.

The financial reforms that were initiated in the early 90s and the globalization and liberalization measures brought in completely new operating environment to the banks. Services and product like ―Anywhere Banking‖, ―Tele-Banking‖, ―Internet Banking‖, ‖Web Banking‖, ―E-Banking‖ and so on, have become the buzzwords of the day and the banks are trying to cope with the competition by offering innovative and attractively packaged technology based services to their customers. Some of the innovations that are made possible on account of the infusion of computerization are described below.

SALIENT FEATURES

1. Core Banking

Banking services provided a group of network through bank branches where customer may access their bank account and perform basis transaction from any of the member branch offices.

2. Internet Banking

A system allowing individuals to perform banking activities at home, via the internet. The automated delivery of new and traditional banking products and services directly through the customers through electronic, interactive communication channels. Some online banks are traditional banks which also offer online banking, while others are online only and have no physical presence.

3. Mobile Banking

Mobile Banking is a system of providing service to a customer to carry out Banking transactions on the ―Mobile Phone‖ through a cellular service provider. It is a service of Banks to make available, the facility of Banking, wherever the customer is and whenever he needs. This facility shall be named as ―Anywhere and Any

moment Banking‖ but it is restricted to only information about his account and not cash services.

4. Tele-banking

In Tele-banking, the customer is essentially identified through a code. The customers can access the Voice Mail System of the bank to obtain certain information such as account balance and status of debit/credit to certain cheques. The customer can do many of his non-cash related transaction over the telephone.

5. Electronic Fund Transfer

The electronic funds transfer device enables early realization and transfer of funds between different centers on the same or the next day through electronic mail or satellite networks. Access various forms of online money transfer with the help of Axis Bank features- NEFT, RTGS, IMPS, Instant Money Transfer, Visa Money Transfer, IFSC, ECS at your fingertips.

6. NEFT (National Electronic Fund Transfer)

Nowadays it‘s quick, convenient and extremely easy to transfer money because technology has reached another level. National Electronic Fund Transfer or NEFT as it is known is a quick and fast way of transferring funds from a particular bank to any other bank that is a participant in this scheme.

7. RTGS (Real-time Gross Settlement)

Money transferring has become a lot easier with technology becoming a major part of our day to day lives. Real-time gross settlement systems (RTGS) is a funds transfer system where money transfer takes place from one bank to another on a "real time" basis and "gross" basis.

8. IMPS (Immediate Payment Service)

IMPS is an instant interbank electronic fund transfer service available 24x7, throughout the year including Sundays and any bank holiday. Customers can transfer and receive funds via IMPS using their registered Mobile number and Mobile Money Identifier (MMID) or through Internet Banking.

9. Instant Money Transfer (Cash transfer, cardless withdrawal)

Instant Money Transfer (IMT) is an innovative domestic service that allows you to send cash to a receiver. All you need to do is mention receiver's mobile number and issue IMT. Receiver need not have a bank account and can make a cardless withdrawal, from any ATM of the banks empanelled.

10. IFSC (Indian Financial System Code)

The world of banking has changed drastically over the last few years. The Indian Financial System Code is critical for NEFT and RTGS transactions. The Indian Financial System Code is an alphanumeric code that uniquely identifies a bank-branch and ensures secure transactions.

11. ECS – (Electronic Clearing Service)

Electronic Clearing Service, ECS, is an electronic clearing system that facilitates paperless credit / debit transaction directly linked to your account and also provides for a faster method of effecting periodic and repetitive payments.

12. Total Branch Automation (TBA)

Total Branch Automation enables customers to transact all their banking work through a single counter instead of going to different counters on the premises. TBA helps significantly in improving the efficiency of operations.

13. Automated Teller Machine (ATM)

The Automated Teller Machine (ATM) is seen everywhere. This machine has brought innovations in the Banking sector all over the world. The customers are no more dependants on the brick and mortar branch of a Bank. The advent of the ATM has made the concept of —24 x 7 –365 days banking‖ a reality. The ATM has been helpful to both the bankers and the customers. The long crowd of customers in the banking hall of a branch waiting for their turn to collect cash is disappearing. The branch business timings have lost significance to the customer after the introduction of the ATM.

The ATM is a device used by bank customers to process account transactions. The customer inserts into the ATM, a plastic card that is encoded with information on a magnetic strip. The strip contains an identification code that is transmitted to the bank‘s central computer by modem. Every card holder would be

given a PIN (personal identification number) that he should enter and after verifying the same with the records, the ATM would allow operations.

2.1.2 Block chain: Meaning - Structure of Block Chain

A blockchain is a distributed ledger with growing lists of records (*blocks*) that are securely linked together via cryptographic hashes. Each block contains a cryptographic hash of the previous block, a timestamp, and transaction data (generally represented as a Merkle tree, where data nodes are represented by leaves). Since each block contains information about the previous block, they effectively form a *chain* (compare linked list data structure), with each additional block linking to the ones before it. Consequently, blockchain transactions are irreversible in that, once they are recorded, the data in any given block cannot be altered retroactively without altering all subsequent blocks.

Blockchains are typically managed by a peer-to-peer (P2P) computer network for use as a public distributed ledger, where nodes collectively adhere to a consensus algorithm protocol to add and validate new transaction blocks. Although blockchain records are not unalterable, since blockchain forks are possible, blockchains may be considered secure by design and exemplify a distributed computing system with high Byzantine fault tolerance.

A blockchain was created by a person (or group of people) using the name (or pseudonym) Satoshi Nakamoto in 2008 to serve as the public distributed ledger for bitcoin cryptocurrency transactions, based on previous work by Stuart Haber, W. Scott Stornetta, and Dave Bayer. The implementation of the blockchain within bitcoin made it the first digital currency to solve the double-spending problem without the need for a trusted authority or central server. The bitcoin design has inspired other applications and blockchains that are readable by the public and are widely used by cryptocurrencies. The blockchain may be considered a type of payment rail.

Private blockchains have been proposed for business use. *Computerworld* called the marketing of such privatized blockchains without a proper security model "snake oil"; however, others have argued that permissioned blockchains, if carefully designed, may be more decentralized and therefore more secure in practice than permissionless ones.

2.1.3 Structure and design

A blockchain is a decentralized, distributed, and often public, digital ledger consisting of records called *blocks* that are used to record transactions across many computers so that any involved block cannot be altered retroactively, without the alteration of all subsequent blocks. This allows the participants to verify and audit transactions independently and relatively inexpensively. A blockchain database is managed autonomously using a peer-to-peer network and a distributed timestamping server. They are authenticated by mass collaboration powered by collective self-interests. Such a design facilitates robust workflow where participants' uncertainty regarding data security is marginal. The use of a blockchain removes the characteristic of infinite reproducibility from a digital asset. It confirms that each unit of value was transferred only once, solving the long-standing problem of double-spending. A blockchain has been described as a *value-exchange protocol*. A blockchain can maintain title rights because, when properly set up to detail the exchange agreement, it provides a record that compels offer and acceptance.

Logically, a blockchain can be seen as consisting of several layers:

- Infrastructure (hardware)
- Networking (node discovery, information propagation[25] and verification)
- consensus (proof of work, proof of stake)
- data (blocks, transactions)
- application (smart contracts/decentralized applications, if applicable)

Blocks

Blocks hold batches of valid transactions that are hashed and encoded into a Merkle tree. Each block includes the cryptographic hash of the prior block in the blockchain, linking the two. The linked blocks form a chain. This iterative process confirms the integrity of the previous block, all the way back to the initial block, which is known as the *genesis block* (Block 0). To assure the integrity of a block and the data contained in it, the block is usually digitally signed.

Sometimes separate blocks can be produced concurrently, creating a temporary fork. In addition to a secure hash-based history, any blockchain has a

specified algorithm for scoring different versions of the history so that one with a higher score can be selected over others. Blocks not selected for inclusion in the chain are called orphan blocks. Peers supporting the database have different versions of the history from time to time. They keep only the highest-scoring version of the database known to them. Whenever a peer receives a higher-scoring version (usually the old version with a single new block added) they extend or overwrite their own database and retransmit the improvement to their peers. There is never an absolute guarantee that any particular entry will remain in the best version of history forever. Blockchains are typically built to add the score of new blocks onto old blocks and are given incentives to extend with new blocks rather than overwrite old blocks. Therefore, the probability of an entry becoming superseded decreases exponentially as more blocks are built on top of it, eventually becoming very low. For example, bitcoin uses a proof-of-work system, where the chain with the most cumulative proof-of-work is considered the valid one by the network. There are a number of methods that can be used to demonstrate a sufficient level of computation. Within a blockchain the computation is carried out redundantly rather than in the traditional segregated and parallel manner.

Block time

The *block time* is the average time it takes for the network to generate one extra block in the blockchain. By the time of block completion, the included data becomes verifiable. In cryptocurrency, this is practically when the transaction takes place, so a shorter block time means faster transactions. The block time for Ethereum is set to between 14 and 15 seconds, while for bitcoin it is on average 10 minutes.

Hard Forks

This section is an excerpt from Fork (Blockchain) & Hard fork.

A *hard fork* is a change to the blockchain protocol that is not backward compatible and requires all users to upgrade their software in order to continue participating in the network. In a hard fork, the network splits into two separate versions: one that follows the new rules and one that follows the old rules.

For example, Ethereum was hard forked in 2016 to "make whole" the investors in the DAO, which had been hacked by exploiting a vulnerability in its code.

In this case, the fork resulted in a split creating Ethereum and Ethereum classic chains. In 2014 the Net community was asked to consider a hard fork that would have led to a rollback of the blockchain records to mitigate the effects of a theft of 50 million NXT from a major cryptocurrency exchange. The hard fork proposal was rejected, and some of the funds were recovered after negotiations and ransom payment. Alternatively, to prevent a permanent split, a majority of nodes using the new software may return to the old rules, as was the case of bitcoin split on 12 March 2013.

A more recent hard-fork example is of Bitcoin in 2017, which resulted in a split creating Bitcoin Cash. The network split was mainly due to a disagreement in how to increase the transactions per second to accommodate for demand.

Decentralization

By storing data across its peer-to-peer network, the blockchain eliminates some risks that come with data being held centrally.The decentralized blockchain may use ad hoc message passing and distributed networking.

In a so-called "51% attack" a central entity gains control of more than half of a network and can then manipulate that specific blockchain record at will, allowing double-spending.

Blockchain security methods include the use of public-key cryptography. A public key (a long, random-looking string of numbers) is an address on the blockchain. Value tokens sent across the network are recorded as belonging to that address. A *private key* is like a password that gives its owner access to their digital assets or the means to otherwise interact with the various capabilities that blockchains now support. Data stored on the blockchain is generally considered incorruptible.

Every node in a decentralized system has a copy of the blockchain. Data quality is maintained by massive database replication and computational trust. No centralized "official" copy exists and no user is "trusted" more than any other. Transactions are broadcast to the network using the software. Messages are delivered on a best-effort basis. Early blockchains rely on energy-intensive mining nodes to validate transactions, add them to the block they are building, and then

broadcast the completed block to other nodes. Blockchains use various time-stamping schemes, such as proof-of-work, to serialize changes. Later consensus methods include proof of stake. The growth of a decentralized blockchain is accompanied by the risk of centralization because the computer resources required to process larger amounts of data become more expensive.

Finality

Finality is the level of confidence that the well-formed block recently appended to the blockchain will not be revoked in the future (is "finalized") and thus can be trusted. Most distributed blockchain protocols, whether proof of work or proof of stake, cannot guarantee the finality of a freshly committed block, and instead rely on "probabilistic finality": as the block goes deeper into a blockchain, it is less likely to be altered or reverted by a newly found consensus.

Byzantine fault tolerance - based proof-of-stake protocols purport to provide so called "absolute finality": a randomly chosen validator proposes a block, the rest of validators vote on it, and, if a supermajority decision approves it, the block is irreversibly committed into the blockchain. A modification of this method, an "economic finality", is used in practical protocols, like the Casper protocol used in Ethereum : validators which sign two different blocks at the same position in the blockchain are subject to "slashing", where their leveraged stake is forfeited.

Openness

Open blockchains are more user-friendly than some traditional ownership records, which, while open to the public, still require physical access to view. Because all early blockchains were permissionless, controversy has arisen over the blockchain definition. An issue in this ongoing debate is whether a private system with verifiers tasked and authorized (permissioned) by a central authority should be considered a blockchain.Proponents of permissioned or private chains argue that the term "blockchain" may be applied to any **data structure** that batches data into time-stamped blocks. These blockchains serve as a distributed version of multiversion concurrency control (MVCC) in databases. Just as MVCC prevents two transactions from concurrently modifying a single object in a database, blockchains prevent two transactions from spending the same single output in a blockchain. Opponents say that permissioned systems resemble traditional corporate databases, not supporting

decentralized data verification, and that such systems are not hardened against operator tampering and revision. Nikolai Hampton of Computerworld said that "many in-house blockchain solutions will be nothing more than cumbersome databases," and "without a clear security model, proprietary blockchains should be eyed with suspicion."

Permissionless (Public) Blockchain

An advantage to an open, permissionless, or public, blockchain network is that guarding against bad actors is not required and no access control is needed. This means that applications can be added to the network without the approval or trust of others, using the blockchain as a transport layer.

Bitcoin and other cryptocurrencies currently secure their blockchain by requiring new entries to include proof of work. To prolong the blockchain, bitcoin uses Hashcash puzzles. While Hashcash was designed in 1997 by Adam Back, the original idea was first proposed by Cynthia Dwork and Moni Naor and Eli Ponyatovski in their 1992 paper "Pricing via Processing or Combatting Junk Mail".

In 2016, venture capital investment for blockchain-related projects was weakening in the USA but increasing in China. Bitcoin and many other cryptocurrencies use open (public) blockchains. As of April 2018, bitcoin has the highest market capitalizatio.

Permissioned blockchains use an access control layer to govern who has access to the network. It has been argued that permissioned blockchains can guarantee a certain level of decentralization, if carefully designed, as opposed to permissionless blockchains, which are often centralized in practice.

Disadvantages of permissioned blockchain

Nikolai Hampton argued in Computerworld that "There is also no need for a '51 percent' attack on a private blockchain, as the private blockchain (most likely) already controls 100 percent of all block creation resources. If you could attack or damage the blockchain creation tools on a private corporate server, you could effectively control 100 percent of their network and alter transactions however you wished." This has a set of particularly profound adverse implications during a financial crisis or debt crisis like the financial crisis of 2007 — 08. Where politically

powerful actors may make decisions that favour some groups at the expense of others, and "the bitcoin blockchain is protected by the massive group mining effort. It's unlikely that any private blockchain will try to protect records using gigawatts of computing power —– it's time-consuming and expensive." He also said, "Within a private blockchain there is also no 'race'; there's no incentive to use more power or discover blocks faster than competitors. This means that many in-house blockchain solutions will be nothing more than cumbersome databases."

Blockchain analysis

The analysis of public blockchains has become increasingly important with the popularity of bitcoin, Ethereum, litecoin and other cryptocurrencies. A blockchain, if it is public, provides anyone who wants access to observe and analyse the chain data, given one has the know-how. The process of understanding and accessing the flow of crypto has been an issue for many cryptocurrencies, crypto exchanges and banks. The reason for this is accusations of blockchain-enabled cryptocurrencies enabling illicit dark market trade of drugs, weapons, money laundering, etc. A common belief has been that cryptocurrency is private and untraceable, thus leading many actors to use it for illegal purposes. This is changing and now specialised tech companies provide blockchain tracking services, making crypto exchanges, law-enforcement and banks more aware of what is happening with crypto funds and fiat crypto exchanges. The development, some argue, has led criminals to prioritise the use of new cryptos such as Monero.

Standardisation

In April 2016, standards Australia submitted a proposal to the International Organization for Standardization to consider developing standards to support blockchain technology. This proposal resulted in the creation of ISO Technical Committee 307, Blockchain and Distributed Ledger Technologies. The technical committee has working groups relating to blockchain terminology, reference architecture, security and privacy, identity, smart contracts, governance and interoperability for blockchain and DLT, as well as standards specific to industry sectors and generic government requirements. More than 50 countries are participating in the standardization process together with external liaisons such as the Society for Worldwide Interbank Financial Telecommunication (SWIFT), the

European Commission, the International Federation of Surveyors the International Telecommunication Union (ITU) and the United Nations Economic Commission for Europe (UNECE).

Many other national standards bodies and open standards bodies are also working on blockchain standards. These include the National Institute of Standards and Technology (NIST), the European Committee for Electrotechnical Standardization (CENELEC), the Institute of Electrical and Electronics Engineers (IEEE), the Organization for the Advancement of Structured Information Standards (OASIS), and some individual participants in the Internet Engineering Task Force (IETF).

Centralized blockchain

Although most of blockchain implementation are decentralized and distributed, Oracle launched a centralized blockchain table feature in Oracle 21C dadatase. The Blockchain Table in Oracle 21c database is a centralized blockchain which provide immutable feature. Compared to decentralized blockchains, centralized blockchains normally can provide a higher throughput and lower latency of transactions than consensus-based distributed blockchains.

Blockchain Structure

Blockchain is a Distributed Ledger Technology. It is a distributed and decentralized database and it is secured ever as compared to other technologies.

Blockchain Architecture

Blockchain is a technology where multiple parties involved in communication can perform different transactions without third-party intervention. Verification and validation of these transactions are carried out by special kinds of nodes.

Benefits of Blockchain:

- It is safer than any other technology.
- To avoid possible legal issues, a trusted third party has to supervise the transactions and validate the transactions.
- There‘s no one central point of attack.

- Data cannot be changed or manipulated, it‘s immutable.

Characteristics of Blockchain Architecture

- **Decentralization:** In centralized transaction systems, each transaction needs to be validated in the central trusted agency (e.g., the central bank), naturally resulting in cost and the performance jam at the central servers. In contrast to the centralized mode, a third party is not needed in the blockchain. Consensus algorithms in blockchain are used to maintain data stability in a decentralized network.

- **Persistency:** Transactions can be validated quickly and invalid transactions would not be admitted by persons or miners who mining the crypto. It is not possible to delete or roll back transactions once they are included in the blockchain network. Invalid transactions do not carry forward further.

- **Anonymity:** Each user can interact with the blockchain with a generated address, which does not disclose the real identity of the miner. Note that blockchain cannot guarantee perfect privacy preservation due to the permanent thing.

- **Auditability:** Blockchain stores data of users based on the Unspent Transaction Output (UTXO) model. Every transaction has to refer to some previous unspent transactions. Once the current transaction is recorded into the blockchain, the position of those referred unspent transactions switches from unspent to spent. Due to this process, the transactions can be easily tracked and not harmed between transactions.

- **Transparency:** The transparency of blockchain is like cryptocurrency, in bitcoin for tracking every transaction is done by the address. And for security, it hides the person‘s identity between and after the transaction. All the transactions are made by the owner of the block associated with the address, this process is transparent and there is no loss for anyone who is involved in this transaction.

- **Cryptography:** The blockchain concept is fully based on security and for that, all the blocks on the blockchain network want to be secure. And for security, it implements cryptography and secures the data using the cipher text and ciphers.

2.1.4 Types of Blockchain Architecture

1. Public Blockchain:

A public blockchain is a concept where anyone is free to join and take part in the core activities of the blockchain network. Anyone can read, write, and audit the ongoing activities on a public blockchain network, which helps to achieve the self-determining, decentralized nature often authorized when blockchain is discussed. Data on a public blockchain is secure as it is not possible to modify once they are validated.

The public blockchain is fully decentralized, it has access and control over the ledger, and its data is not restricted to persons, is always available and the central authority manages all the blocks in the chain. There is publicly running all operations. Due to no one handling it singly then there is no need to get permission to access the public blockchain. Anyone can set his/her own node or block in the network/ chain.

After a node or a block settled in the chain of the blocks, all the blocks are connected like peer-to-peer connections. If someone tries to attack the block then it forms a copy of that data and it is accessible only by the original author of the block.

Advantages:

1. A public network operates on an actuate scheme that encourages new persons to join and keep the network better.
2. There is no agreement in the public blockchain.
3. This means that a public blockchain network is immutable.
4. It has Rapid transactions.

Disadvantages:

1. Public blockchain can be costly in some manner.
2. The person need not give identity, that‘s why there is a possibility of corruption of the block if it is in under attack.
3. Processing speed is sometimes slow.
4. It has Integration issues.

2. Private Blockchain

Miners need permission to access a private blockchain. It works based on permissions and controls, which give limit participation in the network. Only the entities participating in a transaction will have knowledge about it and the other stakeholders not able to access it. By it works on the basis of permissions due to this it is also called a permission-based blockchain. Private blockchains are not like public blockchains it is managed by the entity that owns the network. A trusted person is in charge of the running of the blockchain it will control who can access the private blockchain and also controls the access rights of the private chain network. There may be a possibility of some restrictions while accessing the network of the private blockchain.

Advantages:

1. In a private blockchain, users join the network using the invitations and all are verified.
2. Only permitted users/ persons can join the network.
3. Private Blockchain is partially immutable.

Disadvantages:

1. A private blockchain has trust issues, due to exclusive information being difficult to access it.
2. As the number of participants increases, there is a possibility of an attack on the registered users.

Consortium Blockchain

A consortium blockchain is a concept where it is permissioned by the government and a group of organizations, not by one person like a private blockchain. Consortium blockchains are more decentralized than private blockchains, due to being more decentralized it increases the privacy and security of the blocks. Those like private blockchains connected with government organizations‘ blocks network. Consortium blockchains is lies between public and private blockchains. They are designed by organizations and no one person outside of the organizations can gain access. In Consortium blockchains all companies in between organizations collaborate equally. They do not give access from outside of the organizations/ consortium network.

Advantages:

1. Consortium blockchain providers will always try to give the fastest output as compared to public blockchains.
2. It is scalable.
3. A consortium blockchain is low transaction costs.

Disadvantages:

1. A consortium blockchain is unstable in relationships.
2. Consortium blockchain lacks an economic model.
3. It has flexibility issues.

Core Components of Blockchain Architecture

1. **Node:** Nodes are network participants and their devices permit them to keep track of the distributed ledger and serve as communication hubs in various network tasks. A block broadcasts all the network nodes when a miner looks to add a new block in transactions to the blockchain.

2. **Transactions:** A transaction refers to a contract or agreement and transfers of assets between parties. The asset is typically cash or property. The network of computers in blockchain stores the transactional data as copy with the storage typically referred to as a digital ledger.

3. **Block:** A block in a blockchain network is similar to a link in a chain. In the field of cryptocurrency, blocks are like records that store transactions like a record book, and those are encrypted into a hash tree. There are a huge number of transactions occurring every day in the world. It is important for the users to keep track of those transactions, and they do it with the help of a block structure. The block structure of the blockchain is mentioned in the very first diagram in this article.

4. **Chain:** Chain is the concept where all the blocks are connected with the help of a chain in the whole blockchain structure in the world. And those blocks are connected with the help of the previous block hash and it indicates a chaining structure.

5. **Miners:** Blockchain mining is a process that validates every step in the transactions while operating all cryptocurrencies. People involved in this mining they called miners. Blockchain mining is a process to validate each step in the transactions while operating cryptocurrencies.

6. **Consensus:** A consensus is a fault-tolerant mechanism that is used in computer and blockchain systems to achieve the necessary agreement on a single state of the network among distributed processes or multi-agent systems, such as with cryptocurrencies. It is useful in record keeping and other things.

Kinds of consensus mechanism algorithms

There are different kinds of consensus mechanism algorithms, each of which works on different principles:

- **Proof of Work (PoW):** Proof of Work required a stakeholder node to prove that the work is done and submitted by them certifying them to receive the right to add new transactions in the blockchain.
- **Proof of Stake (PoS):** The proof of Stake is also a common consensus algorithm that evolved as a low-cost low-energy-consuming, low-energy-consuming alternative for the PoW algorithm. For providing the responsibilities the public ledger provides by the virtual currency token like Bitcoin and Ethereum.
- **Proof of Capacity (PoC):** Proof of Capacity (PoC) allow sharing of memory space of the nodes in the blockchain network.
- **Proof of Elapsed Time (PoET):** It encrypts the passage of time cryptographically to reach an agreement without expending many resources.

Hybrid blockchains

A hybrid blockchain has a combination of centralized and decentralized features. The exact workings of the chain can vary based on which portions of centralization and decentralization are used.

Blockchain interoperability

With the increasing number of blockchain systems appearing, even only those that support cryptocurrencies, blockchain interoperability is becoming a topic of

major importance. The objective is to support transferring assets from one blockchain system to another blockchain system. Wegner stated that —interoperability is the ability of two or more software components to cooperate despite differences in language, interface, and execution platform". The objective of blockchain interoperability is therefore to support such cooperation among blockchain systems, despite those kinds of differences.

There are already several blockchain interoperability solutions available. They can be classified into three categories: cryptocurrency interoperability approaches, blockchain engines, and blockchain connectors.

Several individual IETF participants produced the draft of a blockchain interoperability architecture.

Energy consumption concerns

Some cryptocurrencies use blockchain mining —– the peer-to-peer computer computations by which transactions are validated and verified. This requires a large amount of energy. In June 2018, the Bank for International Settlements criticized the use of public proof-of-work blockchains for their high energy consumption.

Early concern over the high energy consumption was a factor in later blockchains such as Cardano (2017), Solana (2020) and Polkadot (2020) adopting the less energy-intensive proof-of-stake model. Researchers have estimated that Bitcoin consumes 100,000 times as much energy as proof-of-stake networks.

In 2021, a study by Cambridge University determined that Bitcoin (at 121 terawatt-hours per year) used more electricity than Argentina (at 121TWh) and the Netherlands (109TWh). According to Digiconomist, one bitcoin transaction required 708 kilowatt-hours of electrical energy, the amount an average U.S. household consumed in 24 days.

In February 2021, U.S. Treasury secretary Janet Yellen called Bitcoin "an extremely inefficient way to conduct transactions", saying "the amount of energy consumed in processing those transactions is staggering". In March 2021, Bill Gates stated that "Bitcoin uses more electricity per transaction than any other method known to mankind", adding "It's not a great climate thing."

Nicholas Weaver, of the International Computer Science Institute at the University of California, Berkeley, examined blockchain's online security, and the energy efficiency of proof-of-work public blockchains, and in both cases found it grossly inadequate. The 31TWh-45TWh of electricity used for bitcoin in 2018 produced 17-23 million tonnes of CO_2. By 2022, the University of Cambridge and Digiconomist estimated that the two largest proof-of-work blockchains, Bitcoin and Ethereum, together used twice as much electricity in one year as the whole of Sweden, leading to the release of up to 120 million tonnes of CO_2 each year.

Let's Sum Up

Banking business has done wonders for the Indian economy. Indian banking is the lifeblood for the nation and people. Banking has helped in developing the vital sectors of the economy and usher in a new dawn of progress on the Indian horizon.

Public Sector banks are those in which the majority stake is held by the Government of India (Govt).

The majority of share capital is held by private individuals and corporate. The private bank includes the old private sector and new private sector banks.

The objectives of the RBI"s response to those challenges facing the banking industry have been directed towards improvements and implementing an effective electronic network providing a robust, secure and reliable communication backbone for the banking system.

Computer technology is used not only to improve the operational efficiency, but also to change the very nature of banking.

New private sector banks and foreign banks have an edge over public sector banks as far as implementation of technological solutions is concerned.

A blockchain is a distributed ledger with growing lists of records (*blocks*) that are securely linked together via cryptographic hashes.

A public blockchain is a concept where anyone is free to join and take part in the core activities of the blockchain network.

Miners need permission to access a private blockchain. It works based on permissions and controls, which give limit participation in the network.

A consortium blockchain is a concept where it is permissioned by the government and a group of organizations, not by one person like a private blockchain.

CHECK YOUR PROGRESS – QUIZ - 5

1. Which of the following is a significant advantage of blockchain technology in banking?

a. Increased use of paper money
b. Decentralized and secure transaction records
c. Higher fees for transactions
d. Slower processing times

2. Blockchain is a peer-to-peer _____distributed ledger technology that makes the records of any digital asset transparent and unchangeable.

a. Decentralized
b. Demanding
c. Secure
d. Popular

3. Blockchain networks are much _____and deal with no real single point of failure.

a. Simpler
b. Easier to scale
c. Convenient
d. Faster

4. Bitcoin is a cryptocurrency, which is an application of Blockchain.

a. True
b. False

5. Blockchain can perform user transactions without involving any third-party intermediaries.

a. With the help of the third party
b. Without involving any third party
c. Without involving any owned
d. Without involving any authenticated

Answers :

1. b. Decentralized and secure transaction records
2. b. Decentralized
3. b. Easier to scale
4. a. True
5. b. Without involving any third party

SECTION 2.2: DIFFERENCES BETWEEN DLT AND BLOCK CHAIN

2.2.1 Difference between DLT and blockchain

DLT and blockchain share a conceptual origin: they are digitalized and decentralized log books of record. Often the terms are confused, but they are differentiated by an unshared set of specific features.

DLT

It is simpler than it might appear. A blockchain, a chain of blocks, is a type of DLT. Meaning, this is a case of a common phenomenon of name recognition causing confusion: when the success of a specific service, product, or application overtakes the ―umbrella‖ to which it belongs and ends up devouring its namesake. In the same way not all sticky notes are Post-it, **not all DLTs are blockchain.**

From a more technical perspective, a DLT is simply a decentralized database that is managed by various participants. There is no central authority that acts as arbitrator or monitor. As a distributed log of records, there is **greater transparency –** making fraud and manipulation more difficult — and it is more complicated to hack the system.

All of this could well be familiar because it‘s written about in article like this one, about the features of blockchain. Blockchain is nothing else but a DLT with a specific set of features. It is also a shared database — a log of records — but in this case shared by means of blocks that, as the name indicates, form a chain. The **blocks are closed by a type of cryptographic signature** called a ‗hash‘; the next block begins with that same ‗hash‘, a kind of wax seal. That is how it is verified that the encrypted information has not been manipulated, and that it can‘t be

manipulated. Blockchain owes its fame, among other things, to the fact that it is the technology behind **the famous Bitcoin cryptocurrency.**

Industry analysts and experts believe that digital ledger technologies can have a significant impact on different areas within the financial sector. For example, on compliance policies or regulatory compliance. Banks manage a **huge amount of data under strict regulations**, and distributed registries — whether blockchain or not — could help immensely with cost savings and the elimination of inefficiencies. A study by Accenture asserts that investment banks can reduce their compliance costs between 30% and 50% by 2025 using DLT.

Advantages of a DLT

Enhanced Security and Trust

DLTs provide an unparalleled level of security compared to traditional data management systems. Given that the same data is stored across multiple nodes, it becomes incredibly difficult for malicious actors to alter information or carry out fraudulent activities. Each transaction is verified by these nodes before being added to the ledger, further strengthening the system's security. The decentralized nature of DLT also fosters a greater degree of trust among participants. As there is no central authority that can be compromised, users can trust that their transactions will be executed as intended. Furthermore, the transparency and immutability of DLT provide a trustworthy system where users can verify transactions independently, enhancing confidence in the system.

Improved Transparency and Auditability

DLT provides an enhanced level of transparency due to the shared and synchronized nature of the ledgers. All transactions are visible to the participants in the network, ensuring transparency and accountability.

In addition, the immutability of transactions recorded on a distributed ledger provides a strong audit trail, making it easier to trace and verify historical data.

This feature is especially valuable in industries like finance and supply chain, where transparency is crucial for trust and regulatory compliance.

It enables stakeholders to track transactions or assets in real-time, reducing the possibility of discrepancies, misunderstandings, and fraud.

Increased Efficiency and Cost Savings

The distributed nature of DLT eliminates the need for intermediaries, thus reducing operational costs and increasing efficiency.

Transactions are processed and verified by consensus among network participants, leading to quicker settlements and fewer errors.

Furthermore, by automating processes through smart contracts, DLT can streamline complex processes, enhancing efficiency, and reducing the need for manual intervention.

Moreover, the reduction of intermediaries leads to significant cost savings, as fees usually associated with intermediation are avoided.

This can be a game-changer for industries such as finance, where transaction costs can significantly impact profitability.

Disadvantages of DLT

1. Scalability Challenges

The need for every node in the network to process every transaction and maintain a copy of the entire ledger can result in significant resource and storage requirements. This makes the system slower and less efficient as the number of participants or transactions increases. The consensus mechanisms used in DLTs can also contribute to scalability issues. These mechanisms, which are crucial for maintaining the integrity of the network, often require significant computational power and can slow down transaction processing time.

2. Regulatory and Legal Uncertainty

Given that DLT is a relatively new technology, there is still a great deal of regulatory and legal uncertainty surrounding its use. Various jurisdictions are still figuring out how to regulate and classify DLT-based applications. This uncertainty can deter businesses and organizations from adopting the technology, as the potential legal implications and regulatory changes may pose a risk. This challenge

extends to issues such as data privacy, cross-border transactions, and legal liability, which are yet to be fully addressed by existing legislation. Until there is clearer regulatory guidance, this uncertainty may continue to hinder broader adoption of DLT.

3. Governance and Consensus Issues

Governance in DLT refers to the decision-making process related to changes in the network or protocol. In a decentralized system, reaching a consensus on these changes can be challenging, and disagreements can lead to splits, or "forks," in the network. For example, if network participants disagree on a proposed change, they may choose to continue operating under different versions of the protocol, resulting in a fork. This can cause disruptions in the network and can even lead to significant fluctuations in the value of a DLT-based asset.

2.2.2 Benefits of Blockchain

Decentralization and Trustless system

The decentralization inherent in blockchain technology eliminates the need for a central authority or intermediary. Instead, multiple participants maintain the ledger, and a consensus mechanism ensures that all copies of the ledger are consistent.

This decentralization allows for a trustless system, in which parties do not need to trust each other but only the system itself. In this system, even if one node is compromised, the integrity of the entire network is not endangered, thanks to the consensus mechanism.

Moreover, without the need for a third-party intermediary, transactions can be faster and cheaper, making the system more efficient overall.

Immutable and Transparent Transactions

Blockchain's immutable nature provides an unalterable record of transactions, providing a high degree of security and trust in the data. Once a block has been added to the chain, the information it contains cannot be changed, making the system highly secure against fraud and manipulation.

This immutability, combined with the transparency of the blockchain, ensures that every transaction is publicly verifiable, making the system very secure and reliable.

In addition to its security benefits, blockchain's transparency can also enhance accountability and trust among network participants.

This is particularly useful in industries like finance and supply chain management, where traceability and transparency are key requirements.

Enhanced Security and Data Integrity

As transactions are verified by network participants and then encrypted and linked to the preceding transaction, it becomes extremely difficult for anyone to alter or delete existing transactions.

This inherent security makes blockchain technology suitable for a variety of applications beyond cryptocurrencies.

For example, it can be used in healthcare to secure patient records, in supply chain management to track goods from origin to consumer, and in finance to execute and verify transactions.

Disadvantages of Blockchain

Scalability Limitations

Blockchain technology faces significant scalability challenges. As the number of transactions on a blockchain increases, so does the size of the blockchain.

This requires significant storage and computational resources, which can slow down transaction speeds and increase costs, making the system less efficient.

In addition, the consensus mechanisms used in blockchains, such as proof-of-work, are resource-intensive and can further limit the scalability of the system.

Although several solutions have been proposed to address these challenges, such as sharding or layer-2 solutions, they have yet to be proven at scale.

Energy Consumption

One of the main criticisms of blockchain, particularly those using proof-of-work consensus mechanisms like Bitcoin, is their high energy consumption.

The process of mining, where powerful computers compete to solve complex mathematical problems to add a new block to the chain, requires a significant amount of electricity.

This has led to concerns about the environmental impact of blockchain technology, particularly in regions where the electricity used for mining is produced using fossil fuels.

These environmental concerns may pose a barrier to the wider adoption of blockchain technology, particularly for organizations with sustainability goals.

Regulatory and Legal Challenges

Due to its decentralized and global nature, it can be difficult to apply existing legal and regulatory frameworks to blockchain technology. This can lead to uncertainty and risks for businesses and users.In addition, blockchain's anonymity and lack of regulation make it a potential vehicle for illicit activities, such as money laundering or illegal trading.This has led some countries to ban or restrict the use of blockchain technology, further complicating the regulatory landscape.

Conceptual Differences Between DLT and Blockchain Consensus Mechanisms

DLT and blockchain technologies both use consensus mechanisms to validate transactions and maintain the integrity of the system. However, the specific consensus mechanisms used can vary.

Blockchain, for example, commonly uses proof-of-work or proof-of-stake mechanisms, which require participants to show evidence of computational work or ownership stake.In contrast, other DLTs may use different consensus mechanisms that are better suited to their specific applications.

For example, some may use voting-based systems or rely on a selected group of trusted validators.These differences in consensus mechanisms can have significant implications for the system's scalability, security, and decentralization.

Scalability

Blockchain's scalability is often limited by its consensus mechanisms and the linear structure of its data, which requires every transaction to be added to the chain.This can lead to slower transaction speeds and higher resource requirements as the size of the blockchain increases.

In contrast, some DLTs may have a more scalable structure, such as a directed acyclic graph (DAG), which allows for parallel transactions and potentially faster transaction speeds.However, these systems may also face their own scalability challenges, such as maintaining the integrity and security of the network as the number of participants grows.

Privacy and Security

Both DLT and blockchain offer high levels of security due to their decentralized and transparent nature.

However, the level of privacy provided can vary. In a public blockchain, all transactions are visible to all network participants, which may not be desirable for certain applications.

In contrast, some DLTs can provide more privacy by allowing for private transactions or restricting who can participate in the network.

However, this can also result in a trade-off with decentralization and transparency.

Applications of DLT and Blockchain Financial Services

DLT and blockchain are poised to revolutionize the financial services sector. They can provide faster and more secure transactions, reduce the need for intermediaries, and improve transparency and traceability.

Applications range from cryptocurrencies and payment systems to smart contracts and decentralized finance (DeFi) platforms.For example, blockchain can streamline cross-border payments by eliminating the need for correspondent banking.DLT, on the other hand, can enhance the efficiency and transparency of securities settlement and trading.

Supply Chain Management

DLT and blockchain can also improve supply chain management by providing real-time, immutable records of goods as they move through the supply chain.

This can increase transparency, improve traceability, and reduce fraud and counterfeiting.For instance, a blockchain-based system can provide a secure and verifiable record of a product's journey from origin to consumer.This can reassure consumers about the authenticity and quality of their purchases, and help businesses comply with regulations and standards.

Healthcare

DLT and blockchain have significant potential in the healthcare sector. They can secure patient data, improve interoperability, and streamline administrative processes.For example, a blockchain-based system can provide a secure and tamper-proof record of a patient's medical history, which can be shared among healthcare providers to improve care coordination.

DLT, meanwhile, can be used to track and verify the distribution of pharmaceuticals, reducing the risk of counterfeit medicines entering the supply chain.

Challenges and Future Trends

Scalability

Scalability remains a challenge as blockchain networks grow. Solutions like sharding and layer-2 scaling aim to address this issue, ensuring that blockchain remains efficient even with increased usage.

Regulatory Landscape

As blockchain matures, governments are developing regulations to govern its use. Staying compliant while harnessing the technology‘s benefits is a delicate balance that businesses must navigate.

Integration with Other Technologies

Blockchain‘s synergy with emerging technologies like AI and IoT promises exciting opportunities. These integrations are poised to revolutionize industries further.As innovation continues to drive the industry forward, cryptocurrencies could potentially become an integral part of the global financial system.

Cryptocurrency, a digital or virtual form of currency, has revolutionized the financial landscape with its decentralized and secure nature. One prominent cryptocurrency that has garnered considerable attention is NavExM.As the world increasingly embraces the possibilities of cryptocurrency, NavExM stands out as a trailblazing platform, spearheading the way towards a more accessible and equitable global financial future.

Challenges and Future Trends

Scalability

Scalability remains a challenge as blockchain networks grow. Solutions like sharding and layer-2 scaling aim to address this issue, ensuring that blockchain remains efficient even with increased usage.

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2.2.3 Unlocking the potential of blockchain

The Italian Society for Authors and Editors was founded in 1882 after artists organized to avoid exploitation. A lot has changed since its founding, with conglomerate streaming services coming to hold huge amounts of power over content like movies and music. The result is a complex copyright ecosystem where royalties for artists are reduced by publishers, lawyers, auditors, and other intermediaries.

But today more than 100,000 artists in the organization have their copyrights digitally represented and can trade or sell those rights at publicly listed market prices on Algorand‘s blockchain. The artists can give permission to use their songs in certain cases while retaining the copyrights.

> —We enjoy artists, but we often don‘t give them what is due to them,‖ Micali

says.

The use case fulfills a central promise of blockchain, empowering people to exchange goods without centralized authorities taking up money and time. It also exemplifies what‘s been a huge source of business for Algorand so far: the tokenization of digital assets, also known as non-fungible tokens, or NFTs.

The application also hits home for Micali, who has been happy to see people in his home country of Italy benefiting from his solution. —It shows how you can regain possession of your own information,‖Micali says. —That‘s a big trend, because very often to make information available you have to give the rights of your information to someone else, who then owns your information. It‘s easy to say you

shouldn‘t do that, but we need technology to get around it. The only way to go forward now is decentralization.‖

Let’s Sum Up

DLT and Blockchain share a conceptual origin: they are digitalized and decentralized log books of record. Often the terms are confused, but they are differentiated by an unshared set of specific features.

DLT provides an enhanced level of transparency due to the shared and synchronized nature of the ledgers. All transactions are visible to the participants in the network, ensuring transparency and accountability.

The decentralization inherent in blockchain technology eliminates the need for a central authority or intermediary.

This decentralization allows for a trustless system, in which parties do not need to trust each other but only the system itself.

One of the main criticisms of blockchain, particularly those using proof-of-work consensus mechanisms like Bitcoin, is their high energy consumption.

Due to its decentralized and global nature, it can be difficult to apply existing legal and regulatory frameworks to blockchain technology.

CHECK YOUR PROGRESS – QUIZ - 6

1. What is the fundamental concept behind Distributed Ledger Technology (DLT)?
    a. Centralized database management
    b. A distributed database across multiple locations
    c. Manual record-keeping
    d. Traditional banking ledgers
2. How is information structured in a blockchain?
    a. Randomized data points
    b. Sequential blocks linked using cryptography
    c. Hierarchical tree format
    d. Centralized files
3. Which of the following is a type of blockchain?
    a. Public blockchain
    b. Private blockchain
    c. Consortium blockchain
    d. All of the above

4. What is a key difference between DLT and blockchain?
    a. Blockchain is a subset of DLT with a specific structure
    b. DLT requires a central authority
    c. Blockchain is not secure
    d. DLT is only used for cryptocurrencies
5. Which of these is a benefit of using blockchain technology
    a. Increased transaction costs
    b. Enhanced security and transparency
    c. Slower transaction times
    d. Centralized control

Answers :

1. b. A distributed database across multiple locations
2. b. Sequential blocks linked using cryptography
3. d. All of the above
4. a. Blockchain is a subset of DLT with a specific structure
5. b. Enhanced security and transparency

SECTION 2.3: CRYPTOCURRENCIES

2.3.1 CRYPTOCURRENCIES

Cryptocurrencies use blockchain technology to record transactions. For example, the bitroin network and Ethereum network are both based on blockchain.The criminal enterprise slik road, which operated on Tor, utilized cryptocurrency for payments, some of which the US federal government has seized through research on the blockchain and forfeiture.

Governments have mixed policies on the legality of their citizens or banks owning cryptocurrencies. China implements blockchain technology in several industries including a national digital currency which launched in 2020. To strengthen their respective currencies, Western governments including the European Union and the United States have initiated similar projects.

Smart contracts

Blockchain-based smart contracts are contracts that can be partially or fully executed or enforced without human interaction. One of the main objectives of a smart contract is automated escrow. A key feature of smart contracts is that they do not need a trusted third party (such as a trustee) to act as an intermediary between contracting entities — the blockchain network executes the contract on its own. This may reduce friction between entities when transferring value and could subsequently open the door to a higher level of transaction automation. An IMF staff discussion from 2018 reported that smart contracts based on blockchain technology might reduce moral hazards and optimize the use of contracts in general. But "no viable smart contract systems have yet emerged." Due to the lack of widespread use, their legal status was unclear.

Financial services

According to Reason, many banks have expressed interest in implementing distributed ledgers for use in banking and are cooperating with companies creating private blockchains, and according to a September 2016 IBM study, this is occurring faster than expected.

Banks are interested in this technology not least because it has the potential to speed up back office settlement systems. Moreover, as the blockchain industry has reached early maturity institutional appreciation has grown that it is, practically speaking, the infrastructure of a whole new financial industry, with all the implications which that entails.

Banks such as UBS are opening new research labs dedicated to blockchain technology in order to explore how blockchain can be used in financial services to increase efficiency and reduce costs.

Berenberg, a German bank, believes that blockchain is an "overhyped technology" that has had a large number of "proofs of concept", but still has major challenges, and very few success stories.

The blockchain has also given rise to initial coin offerings (ICOs) as well as a new category of digital asset called security token offerings (STOs), also sometimes referred to as digital security offerings (DSOs). STO/DSOs may be conducted privately or on public, regulated stock exchange and are used to tokenize traditional assets such as company shares as well as more innovative ones like intellectual property, real estate, art, or individual products. A number of companies are active in this space providing services for compliant tokenization, private STOs, and public STOs.

Games

Blockchain technology, such as cryptocurrencies and non-fungible tokens (NFTs), has been used in video games for monetization. Many live-service games offer in-game customization options, such as character skins or other in-game items, which the players can earn and trade with other players using in-game currency. Some games also allow for trading of virtual items using real-world currency, but this may be illegal in some countries where video games are seen as akin to gambling, and has led to gray market issues such as skin gambling, and thus publishers typically have shied away from allowing players to earn real-world funds from games. Blockchain games typically allow players to trade these in-game items for cryptocurrency, which can then be exchanged for money.

The first known game to use blockchain technologies was Cryptokitties, launched in November 2017, where the player would purchase NFTs with Ethereum cryptocurrency, each NFT consisting of a Virtual pet that the player could breed with others to create offspring with combined traits as new NFTs. The game made headlines in December 2017 when one virtual pet sold for more than US$100,000. *CryptoKitties* also illustrated scalability problems for games on Ethereum when it created significant congestion on the Ethereum network in early 2018 with approximately 30% of all Ethereum transactions being for the game.

By the early 2020s, there had not been a breakout success in video games using blockchain, as these games tend to focus on using blockchain for speculation instead of more traditional forms of gameplay, which offers limited appeal to most players. Such games also represent a high risk to investors as their revenues can be difficult to predict. However, limited successes of some games, such as Axie Infinity during the Covid - 19 Pandemic, and corporate plans towards metaverse content, refueled interest in the area of GameFi, a term describing the intersection of video games and financing typically backed by blockchain currency, in the second half of 2021. Several major publishers, including Ubisoft, Electronic Arts, and take two interactive, have stated that blockchain and NFT-based games are under serious consideration for their companies in the future.

Supply chain

There have been several different efforts to employ blockchains in supply chain management.

- **Precious Commodities mining —** Blockchain technology has been used for tracking the origins of gemstones and other precious commodities. In 2016, the wall street journal reported that the blockchain technology company Everledger was partnering with IBM‘s blockchain-based tracking service to trace the origin of diamonds to ensure that they were ethically mined. As of 2019, the Diamond Trading Company (DTC) has been involved in building a diamond trading supply chain product called Tracer.
- **Food supply**— As of 2018, Walmart and IBM were running a trial to use a blockchain-backed system for supply chain monitoring for lettuce and spinach —

all nodes of the blockchain were administered by Walmart and were located on the IBM cloud.

- **Fashion Industry** — There is an opaque relationship between brands, distributors, and customers in the fashion industry, which prevents the sustainable and stable development of the fashion industry. Blockchain makes up for this shortcoming and makes information transparent, solving the difficulty of sustainable development of the industry.

- **Motor vehicles** — Mercedes — Benz and partner Icertis developed a blockchain prototype used to facilitate consistent documentation of contracts along the supply chain so that the ethical standards and contractual obligations required of its direct suppliers can be passed on to second tier suppliers and beyond. In another project, the company uses blockchain technology to track the emissions of climate-relevant gases and the amount of secondary material along the supply chain for its battery cell manufacturers.

Domain names

There are several different efforts to offer domain name services via the blockchain. These domain names can be controlled by the use of a private key, which purports to allow for uncensorable websites. This would also bypass a registrar's ability to suppress domains used for fraud, abuse, or illegal content.

Namecoin is a cryptocurrency that supports the ".bit" top-level domain (TLD). Namecoin was forked from bitcoin in 2011. The .bit TLD is not sanctioned by ICANN, instead requiring an alternative DNS root. As of 2015, .bit was used by 28 websites, out of 120,000 registered names. Namecoin was dropped by OpenNIC in 2019, due to malware and potential other legal issues. Other blockchain alternatives to ICANN include *The Handshake Network*,*EmerDNS*, and *Unstoppable Domains*.

Specific TLDs include ".eth", ".luxe", and ".kred", which are associated with the Ethereum blockchain through the Ethereum Name Service (ENS). The .kred TLD also acts as an alternative to conventional cryptocurrency wallet addresses as a convenience for transferring cryptocurrency.

2.3.2 What Is a Central Bank Digital Currency (CBDC)?

A central bank digital currency (CBDC) is a form of digital currency issued by a country's central bank. It is similar to cryptocurrencies, except that its value is fixed by the central bank and is equivalent to the country's fiat currency.

Many countries are developing CBDCs, and some have even implemented them. Because so many countries are researching ways to transition to digital currencies, it's important to understand what CBDCs are and what they mean for society.

- A central bank digital currency (CBDC) is the digital form of a country's fiat currency.
- A nation's monetary authority, or central bank, issues a CBDC, which promotes financial inclusion and simplifies the implementation of monetary and fiscal policies.
- Many countries are exploring how CBDCs may affect their economies, financial networks, and stability.
- It's important for people and nations to understand central bank digital currencies because some of the world's economies are moving toward their use.

Understanding Central Bank Digital Currencies (CBDCs)

Fiat money is a government-issued currency that has no physical commodity like gold or silver backing it up. It is considered a form of legal tender that can be exchanged for goods and services. Traditionally, fiat money has been banknotes and coins, but technology has allowed governments and financial institutions to supplement physical fiat money with a credit-based currency model that records balances and transactions digitally.

Physical currency is still widely exchanged and accepted. However, some developed countries have experienced a drop in its use, and that trend accelerated during the pandemic. The introduction and evolution of cryptocurrency and blockchain technology have spurred additional interest in cashless societies and digital currencies.

Governments and central banks worldwide are exploring the possibility of using government-backed digital currencies. When and if they are implemented, these currencies would have the full faith and backing of the government that issues them, just as fiat money does.

Purposes of CBDCs

In the U.S. and many other countries, many individuals don't have access to financial services. In the U.S. alone, 6% of adults had no bank account in 2023.In many other countries, the numbers are much higher. With that in mind, the main purposes of CBDCs are:

- To provide businesses and consumers conducting financial transactions with privacy, transferability, convenience, accessibility, and financial security.
- Decrease the cost of maintenance that a complex financial system requires, reduce cross-border transaction costs, and provide those who currently use alternative money-transfer methods with lower-cost options.
- Reduce the risks of using digital currencies, or cryptocurrencies, in their current form. Cryptocurrencies are highly volatile, with their value constantly fluctuating. This volatility could cause severe financial stress in many households and affect the overall stability of an economy. CBDCs, backed by a government and controlled by a central bank, would give households, consumers, and businesses a secure means of exchanging digital currency.

A CBDC also provides a country's central bank with the means to implement monetary policies to ensure stability, control growth, and influence inflation.

Types of CBDCs

There are two types of CBDCs: wholesale and retail. Financial institutions are the primary users of wholesale CBDCs, whereas consumers and businesses use retail CBDCs.

Wholesale CBDCs

Wholesale CBDCs function similarly to holding reserves in a central bank. The central bank grants an institution an account in which to deposit funds or to use to settle interbank transfers. Central banks can then use monetary policy tools, such as reserve requirements or interest on reserve balances, to set interest rates and influence lending.

Retail CBDCs

Retail CBDCs are government-backed digital currencies used by consumers and businesses. Retail CBDCs eliminate intermediary risk—the risk that private digital currency issuers might become bankrupt and lose customers' assets.

There are two types of retail CBDCs. They differ in how individual users access and use their currency:

- Token-based retail CBDCs are accessible with private keys, public keys, or both. This method of validation allows users to execute transactions anonymously.
- Account-based retail CBDCs require digital identification to access an account.

It is possible to develop and implement the two types of CBDCs and have them function in the same economy.

Issues Concerning CBDCs

The Federal Reserve has identified issues addressed by CBDCs, as well as matters that must be addressed before a CBDC can be designed and implemented.

Issues Addressed By CBDCs

- Free from credit and liquidity risk
- Lower cross-border payment costs
- Support the international role of the dollar
- Aim for financial inclusion
- Expand access to the general public

Issues Created by CBDCs

- Financial structure changes
- Financial system stability
- Monetary policy influence
- Privacy and protection
- Cybersecurity

Issues Addressed by CBDCs

- Eliminate the third-party risk of events like bank failures or bank runs. Any residual risk that remains in the system rests with the central bank.
- Can lower high cross-border transaction costs by reducing the complex distribution systems and increasing jurisdictional cooperation between governments.
- Could support and protect U.S. dollar dominance; the U.S. dollar is still the most-used currency in the world.
- Remove the cost of implementing a financial structure within a country to bring financial access to the unbanked population.
- Can establish a direct connection between consumers and central banks, thus eliminating the need for expensive infrastructure.

Issues Created by CBDCs

- If the U.S. financial structure drastically changes, it's unknown how it would affect household expenses, investments, banking reserves, interest rates, the financial services sector, or the economy.
- A switch to a CBDC could have an unknown effect on a financial system's stability. For example, there may not be enough central bank liquidity to facilitate withdrawals during a financial crisis.
- Central banks implement monetary policy to influence inflation, interest rates, lending, and spending, which in turn affects employment rates. Central banks must ensure that they have the tools needed to impact the economy positively.
- Privacy is one of the most significant drivers behind cryptocurrency. CBDCs would require an appropriate amount of intrusion by authorities to monitor for financial crimes; monitoring is also important because it supports efforts to combat money laundering and the financing of terrorism.
- Cryptocurrencies have been the target of hackers and thieves. A central bank-issued digital currency would likely attract the same crowd of thieves. Therefore, efforts to prevent system penetration and theft of assets and information would need to be robust.

CBDCs vs. Cryptocurrencies

The cryptocurrency ecosystem provides a glimpse of an alternative currency system in which cumbersome regulations don't dictate the terms of each transaction. Such transactions are hard to duplicate or counterfeit and are secured by consensus mechanisms that prevent tampering.

Central bank digital currencies are designed to be similar to cryptocurrencies, but they may not require blockchain technology or consensus mechanisms.

Additionally, cryptocurrencies are unregulated and decentralized. Their value is dictated by investor sentiments, usage, and user interest. They are volatile assets more suited for speculation, which makes them unlikely candidates for use in a financial system that requires stability. CBDCs mirror the value of fiat currency and are designed for stability and safety.

CBDCs in Use and in Development

Central banks in many countries have launched pilot programs and research projects to determine the viability and usability of a CBDC in their economies.

As of March 2024, three countries had a functioning CBDC: the Bahamas, Jamaica, and Nigeria. The Eastern Caribbean Currency Union halted its CBDC for technical reasons and started a new pilot program.

What Is the Purpose of a CBDC?

CBDCs are government-backed digital currencies that use blockchain or distributed ledger technology. Their purpose is to expand accessibility to financial services and lower the maintenance costs of current monetary systems.

Is the U.S. Going to Digital Currency?

Not yet. The Federal Reserve and its branches are researching CBDCs and ways to implement them in the U.S. financial system. President Joe Biden ordered the development of a national strategy on digital currencies.

Has Any Country Launched a CBDC?

Yes, Jamaica, Nigeria, and The Bahamas have launched CBDCs.

Is CBDC a Threat?

CBDCs should be implemented to enhance existing financial networks and fiat currencies, not replace them. If one was launched to replace a fiat currency, it might cause problems in a system—but no country has tried it yet, so the effects it might have are unknown or theoretical at best.

The Bottom Line

Many countries are researching or developing central bank digital currencies, and three have implemented them. A CBDC's main purpose is to provide businesses and consumers with privacy, transferability, convenience, accessibility, and financial security.

Many individuals throughout the world have no access to bank accounts, so a CBDC would give them a way to be paid, hold their money, and pay bills. CBDCs could also decrease the maintenance a complex financial system requires, reduce cross-border transaction costs, and give people who use alternative money-transfer methods lower-cost options.

2.3.3 What Is Distributed Ledger Technology (DLT)?

Distributed ledger technology (DLT) is the technological infrastructure and protocols that allow simultaneous access, validation, and record updating across a networked database. DLT is the technology blockchains are created from, and the infrastructure allows users to view any changes and who made them, reduces the need to audit data, ensures data is reliable, and only provides access to those that need it.

- Distributed ledgers are maintained by a network of nodes, each of which has a copy of the ledger, validates the information, and helps reach a consensus about its accuracy.
- Distributed ledgers have been around for decades but have become more well-known, researched, used, and developed since Bitcoin was introduced.
- Distributed ledgers can be used in nearly every industry where data is collected and used.

- All blockchains are distributed ledgers, but not all distributed ledgers are blockchains.

- Though DLT enhances accountability, security, and accessibility, it is still complex and difficult to scale.

History of Distributed Ledgers

Distributed computing is not new—businesses and governments have been using the concept for several decades. In the 1990s, it became possible for multiple computers and users in different locations to solve problems and return the solutions to a central location.

Advances in data science, computing, software, hardware, and other technologies have made ledgers much more capable. Improved connectivity through intranet and internet protocols allowed for much more data to be collected, analyzed, and used. However, because there can now be many users with access to data, it is necessary to have someone verify the changes.

Computer and data scientists developed programs that reduced the need for auditing data. These programs used automation and data encryption techniques to verify database transactions or changes in a database's state. This is called consensus—the act of automated majority agreement on transaction validity, where a transaction is simply a change made to a database's state.

Distributed ledgers evolved into scalable and programmable platforms, as seen in Ethereum and HyperLedger, where solutions can be created to use a database, or ledger, for everything from tokenizing physical assets to streamlining manufacturing and other business processes.

How Distributed Ledger Technology Works

DLTs allow information to be stored securely and accurately using cryptography. The data can be accessed using "keys" and cryptographic signatures. Once the information is stored, it can become an immutable database; the rules of the network, written into the coding of the database programming, govern the ledger.

Because they are decentralized, private, and encrypted, distributed ledgers are less prone to cybercrime, as all the copies stored across the network need to be attacked simultaneously for the attack to be successful. Additionally, the peer-to-peer sharing and updating of records make the whole process much faster, more effective, and cheaper.

Every device on a distributed ledger network stores a copy of the ledger. These devices are called nodes—a network can have any number of nodes. Any changes to the ledger, such as moving data from one block to another, are recorded across all nodes. Because each node has a copy of the ledger, each one publishes its version with the latest transactions.

If the network reaches a consensus about the validity of the latest ledger, the transactions are finalized, encrypted, and used as a basis for the following transactions. This is how blockchains develop—each block contains encrypted information about the proceeding block, which makes them impossible to change.

Industries Using Distributed Ledger Technology

Distributed ledgers are created for many different purposes, but one of the most used ways is as a platform for others to scale and use. One of the more well-known distributed ledgers is Hyperledger Fabric. It is a modular and scalable DLT platform several businesses have used to create solutions that span many industries. Some industries that have implemented DLT solutions include aviation, education, healthcare, insurance, manufacturing, transportation, and utilities.

Supply chains can benefit greatly from DLT. Many factors make these chains inefficient, inaccurate, and susceptible to corruption or losses. Fujitsu, a global data and information technology company, has designed distributed ledger technology to enhance supply chain transparency and fraud prevention by securing and tracking data.

Fujitsu's Rice Exchange was created to trade rice, ensuring data regarding sources, prices, insurance, shipping, and settlement are recorded on the ledger.

Anyone involved can look at any data and find accurate information regarding the entire process because it cannot be changed. All data is entered and secured

automatically by the platform—it will eventually provide tracking information for rice shipping containers as they are shipped to their final destinations.

Uses of Distributed Ledger Technology

Aside from specific industries, there are also specific situations where DLT solutions have proven to add value. Some examples of specific DLT uses include:

- **Record transactions**: DLT enables secure, transparent, and decentralized transactions without the need for a central authority. As DLT is a ledger, it records inputs and outputs. Though this naturally lends itself to financial records, DLT can record any type of transaction, not just financially based ones.

- **Secure identities**: DLT can be used to create a secure and tamper-proof digital identity for individuals, as the technology can provide a reliable way to verify identities and prevent identity theft.

- **Collect votes**: DLT can be used to create a secure and transparent voting system that can prevent voter fraud and ensure the integrity of the voting process. As mentioned above, as transactions (financial or non-financial) are recorded, a transparent, immutable, open ledger of interactions with users is saved. This enhances the equity and believability of a collection of opinions.

- **Enter contracts**: DLT allows for smart contracts, programs that automatically execute or complete based on prevailing conditions. For example, an insurance claim may automatically release funds once it has been processed and approved. This limits errors, and DLTs make it more difficult for bad actors to alter information.

- **Demonstrate ownership**: DLT can be used to record property transactions, creating a tamper-proof and transparent record of ownership and transfer of property. Though there are some limitations on translating real-world ownership of physical assets to a distributed ledger, the ledger may be able to convey an unchangeable source of truth regarding ownership.

Advantages and Disadvantages of Distributed Ledger Technology

Pros of DLT

DLT holds many benefits over more traditional centralized ledger systems. Because DLT is a decentralized system, there is no central point of control or failure. This makes DLT more resilient to attacks and less vulnerable to system-wide failures. Also, because DLT uses cryptographic algorithms to secure data, it is nearly impossible to tamper with or forge records. This enhances the trustworthiness of the data and reduces the risk of fraud.

DLT allows for transparent access to data and transactions, allowing all users greater visibility into the operations of the system. This may lead to greater buy-in from users due to transparency and accountability of records.

DLT can streamline processes by removing intermediaries and automating transactions through smart contracts. Because smart contracts may automatically execute when contract conditions are met, there may be less need for human interaction or administration. This can reduce costs and increase efficiency.

Lastly, DLT can enable greater financial inclusion. Some people may not have access to traditional banking services. As DLT often relies only on an internet connection, individuals who would be otherwise limited may have access to a greater range of services. This extends to the use of different platforms and networks via interoperability.

Cons of DLT

Due to DLT's infancy, there are still considerable downsides to the technology. DLT is still complex and difficult to implement and maintain. Leveraging the solution often requires specialized knowledge and expertise, especially to implement.

DLT can struggle with scalability as the number of participants and transactions increases. As a result, DLT processes may lead to slower processing capabilities or higher use costs. In addition, some DLTs, such as Bitcoin, require a significant amount of energy to maintain the network and process transactions. This can have negative environmental impacts.

The lack of regulation and standardization in the blockchain industry (blockchains are derived from DLT) can lead to risk for users and investors. By extension, DLT requires widespread adoption to be effective, and many industries and organizations may be hesitant to adopt new technologies due to these security concerns.

Distributed ledgers might be immutable, but this benefit also comes with a significant downside—if mistakes are made, they cannot be changed unless there are users with permission to do so. In a public DLT like the Bitcoin blockchain, this can be problematic. For instance, if a user typed an erroneous address in their wallet and sent the wrong person some Bitcoin, they cannot reverse the transaction.

Pros

- Spreads systematic risk around, minimizing the risk of a single point of failure
- Has greater security due to cryptographic algorithms
- Allows for transparency and visibility into operations
- May prove to be more efficient due to smart contract automation
- Offers individuals with limited access to traditional systems potentially greater capabilities

Cons

- Is more complex compared to traditional ledger solutions
- Can require higher energy consumption for operation
- May have difficult scaling as more users/transactions occur
- Some applications remain risky due to lack of regulation
- May prove to be difficult to reverse fraudulent or erroneous activity

Why Distribute Ledger Technology Is Important

DLT is important because it has the potential to transform how information is recorded, stored, and distributed. The importance is often cited across three pillars: security, transparency, and accessibility.

Security

Traditional ledger technology often has a central point of control, with one single entity often in charge of the ledger. DLT makes the ledger more resilient to

attacks and less vulnerable to system-wide failures. As DLT uses cryptographic algorithms to secure data, it also makes it more difficult to tamper with or forge records.

Consider a traditional banking system where a banker is the central point in ensuring your transaction is recorded correctly. In contrast, consider a DLT solution built on a consensus mechanism where all distributed ledgers must be in agreement about how a transaction is recorded. This validation of transactions allows greater trust among users and removes the power an individual might have to alter data.

Transparency

Centralized, traditional ledgers often restrict access to specific individuals. Though this still holds value for sensitive information, there are many use cases where it is more beneficial for all when data and information are broadly distributed and transparent. Consider the example above of voting; having digitally distributed, undisputable, verifiable records of voting may enhance the believability of results.

DLT is also important as it holds the theory of reducing fraud and increasing accountability in the long term. Note how all transactions within a DLT system are able to be viewed by anyone with access to the DLT. The information may be "audited" by anyone at any time, potentially demotivating bad actors from entering into nefarious activity in such a public sphere.

Accessibility

Last, DLT may eventually be critically important to developing and emerging countries or regions where centralized technologies are limited. Think about the banking limitations of different countries around the world. DLT boasts the ability to store and record transactions using only a network connection as opposed to a very niche (and expensive) connection, such as a bank account at a specific bank.

As DLT is a relatively new technology that is still being explored and developed, this presents opportunities for innovation and the creation of new applications and use cases. In general, because of the easier access to DLT solutions, there are many positive implications. Notably, the broad public's ability to communally access a shared network often has fewer bureaucratic hurdles.

Distributed Ledger Technology Consensus Mechanisms

A central facet of DLT is how transactions are "approved" when consensus needs to be reached among a disparate user base. Without a universally agreed-upon system of how items are accepted within the DLT, users of the DLT would be unable to agree on the validity of information.

This process of reviewing transactions is called a consensus mechanism, and a DLT may leverage any of the following processes (not all DLT applications will require a consensus mechanic). Note that consensus mechanisms are constantly evolving, and only the more common approaches are listed below:

- **Proof of Work (PoW)**: In PoW, miners compete to solve cryptographic puzzles to validate transactions and create new blocks. This type of consensus mechanism requires computational power, making it a less environmentally friendly method. The concept behind PoW is that miners must financially invest and commit resources to approve transactions, so they are incentivized to be "good actors."

- **Proof of Stake (PoS)**: In PoS, validators hold a stake in the network and are chosen to validate transactions based on the amount of the stake they hold. Seen as a more environmentally friendly option, it is very expensive to become a full validator and earn rewards.

- **Delegated Proof of Stake (DPoS)**: DPoS is a variant of proof of stake where the network selects a limited number of validators by delegating their tokens to a particular staking pool or candidate. This variation reduces the computational resources required to secure the network. In many ways, a DPoS system is seen as a more democratic means of selecting approvers and, in some instances, might offer better scalability.

Distributed Ledgers vs. Blockchain

Several key factors distinguish blockchain from distributed ledgers. In general, blockchain is a specific type of DLT. DLTs may take various forms, while a blockchain uses one specific infrastructure: a linear system of blocks that records information.

Blockchains often leverage a proof of work or proof of stake consensus mechanism, whereas a DLT has a much broader range of mechanisms available. In addition, DLTs are often more broadly used across industries as they can be leveraged for problems in those industries. Blockchain has historically been most associated with the financial sector as a means of recording a payment system. The security behind either may also vary, with blockchain having a very defined set of criteria within the DLT realm.

Distributed Ledgers

- Data can be chained
- Can be encrypted
- Private or public and permissioned, but can be permissionless
- Can be immutable

Blockchain

- Data is stored in chained files called "blocks"
- Always encrypted
- Generally public and permissionless, but some are permissioned
- Always immutable.

Let's Sum Up

Cryptocurrencies use blockchain technology to record transactions. For example, the bitroin network and Ethereum network are both based on blockchain.

The main objectives of a smart contract is automated escrow. A key feature of smart contracts is that they do not need a trusted third party (such as a trustee) to act as an intermediary between contracting entities — the blockchain network executes the contract on its own.

Banks are interested in this technology not least because it has the potential to speed up back office settlement systems. The blockchain industry has reached early maturity institutional appreciation has grown that it is, practically speaking, the infrastructure of a whole new financial industry, with all the implications which that entails.

Blockchain technology has been used for tracking the origins of gemstones and other precious commodities. The wall street journal reported that the blockchain technology company Everledger was partnering with IBM‘s blockchain-based tracking service to trace the origin of diamonds to ensure that they were ethically mined.

There are several different efforts to offer domain name services via the blockchain. These domain names can be controlled by the use of a private key, which purports to allow for uncensorable websites.

A central bank digital currency (CBDC) is a form of digital currency issued by a country's central bank. It is similar to cryptocurrencies, except that its value is fixed by the central bank and is equivalent to the country's fiat currency.

Fiat money is a government-issued currency that has no physical commodity like gold or silver backing it up. It is considered a form of legal tender that can be exchanged for goods and services.

Distributed ledger technology (DLT) is the technological infrastructure and protocols that allow simultaneous access, validation, and record updating across a networked database.

CHECK YOUR PROGRESS – QUIZ - 7

1. What is the fundamental concept behind Distributed Ledger Technology (DLT)?

a. Centralized database management

b. A distributed database across multiple locations

c. Manual record-keeping

d. Traditional banking ledgers

2. What is a key difference between DLT and blockchain?

a. Blockchain is a subset of DLT with a specific structure

b. DLT requires a central authority

c. Blockchain is not secure

d. DLT is only used for cryptocurrencies

3. Which of these is a benefit of using blockchain technology

a. Increased transaction costs

b. Enhanced security and transparency

c. Slower transaction times

d. Centralized control

4. What is a Central Bank Digital Currency (CBDC)?

a. A decentralized cryptocurrency

b. A digital form of a country‘s fiat currency issued by its central bank

c. A type of private blockchain

d. A form of traditional banking asset

5. What role does DLT play in financial services?

a. Increases the need for intermediaries

b. Enhances security, transparency, and efficiency in financial transactions

c. Reduces data integrity

d. Slows down transaction processes

Answers :

1. b. A distributed database across multiple locations
2. a. Blockchain is a subset of DLT with a specific structure
3. b. Enhanced security and transparency
4. b. A digital form of a country‘s fiat currency issued by its central bank
5. b. Enhances security, transparency, and efficiency in financial transactions

SECTION 2.4: AI IN BANKING

2.4.1 AI in Banking

Artificial Intelligence (AI) is an increasingly important technology for the banking sector. When used as a tool to power internal operations and customer-facing applications, it can help banks improve customer service, fraud detection and money and investment management.

To stay ahead of technology trends, increase their competitive advantage, and provide valuable services and better customer experiences, financial services firms like banks have embraced digital transformation initiatives.

The advent of AI technologies has made digital transformation even more important, as it has the potential to remake the industry and determine which companies thrive.

2.4.2 Future of AI in Banking

The future of AI in banking is set to be transformative, with advancements expected to significantly enhance the industry. Some areas where AI is poised to make a substantial impact are listed below

1. Hyper-Personalized Banking Services

AI will enable banks to understand their customers at an individual level, offering tailored financial advice, personalized product recommendations, and customized service experiences. AI will analyze customers' spending patterns, preferences, and behaviors to proactively suggest products and services that match their needs.

2. Advanced Fraud Detection and Cybersecurity

Enhanced AI algorithms will detect and prevent fraudulent transactions in real time, improving security and reducing financial losses. AI will predict potential security threats and vulnerabilities, allowing banks to implement preventive measures and enhance cybersecurity.

3. Automation and Process Optimization

AI-driven RPA will further streamline back-office operations, reducing manual tasks and improving efficiency. AI will facilitate the use of smart contracts on blockchain platforms, automating and securing various banking processes.

4. Enhanced Customer Support

These will become more sophisticated, providing seamless, conversational interactions, and handling more complex customer inquiries. AI will enable secure and convenient authentication methods using voice recognition and biometrics.

5. Predictive Analytics and Decision Making

AI will analyze vast datasets to predict market trends, helping banks make informed investment decisions and strategic plans. AI models will provide more

accurate credit scoring and risk assessment, improving loan approval processes and reducing defaults.

6. Financial Advisory and Wealth Management

AI-powered robo-advisors will offer personalized investment advice, portfolio management, and financial planning services to a broader audience. AI will analyze market data and customer profiles to develop advanced investment strategies tailored to individual needs.

7. Regulatory Compliance and Reporting

AI will automate the monitoring and reporting of compliance with regulatory requirements, reducing the risk of non-compliance and associated penalties. Advanced AI-driven RegTech solutions will streamline regulatory processes, making compliance more efficient and cost-effective.

8. Enhanced Customer Relationship Management

AI will analyze customer feedback and sentiment from various channels to provide insights into customer satisfaction and areas for improvement. AI will predict CLV, helping banks focus their efforts on high-value customers and improve customer retention strategies.

9. Sustainable and Ethical Banking

AI will help banks assess and integrate ESG factors into their decision-making processes, promoting sustainable and ethical banking practices. AI will support the development of green finance products and services, helping banks contribute to environmental sustainability.

10. Financial Inclusion and Accessibility

AI will assess the creditworthiness of individuals with limited credit history, facilitating access to microloans and financial services for underserved populations. AI will enable banks to design inclusive products and services that cater to diverse customer segments, promoting financial inclusion.

11. Collaboration with Fintechs

AI will facilitate seamless integration with fintech platforms through open banking APIs, enabling banks to offer innovative services and improve customer experiences. Banks will increasingly collaborate with fintech startups to leverage AI-driven solutions and stay competitive in the evolving financial landscape.

The future of AI in banking is poised to bring about profound changes, driving innovation, enhancing efficiency, and delivering superior customer experiences. By embracing AI technologies, banks can stay ahead of the curve, ensuring sustainable growth and competitiveness in a rapidly changing financial environment.

2.4.3 Applications of AI in Banking

AI's integration into banking is revolutionizing various facets of the industry in the following aspects of banking.

1. Customer Service and Support

AI-powered chatbots and virtual assistants provide 24/7 customer support, handling inquiries, processing transactions, and providing information efficiently. Examples include Bank of America's Erica and Capital One's Eno. AI tailors‘ communication based on customer preferences and behavior, enhancing customer engagement and satisfaction.

2. Fraud Detection and Prevention

AI systems analyze transaction patterns to detect unusual activities that could indicate fraud, enabling real-time intervention. Machine learning algorithms predict potential fraudulent activities by analyzing historical data, helping banks prevent fraud before it occurs.

3. Risk Management

AI models assess creditworthiness more accurately by analyzing a wide range of data points, including social media activity, transaction history, and more. AI streamlines the underwriting process, making it faster and more reliable by analyzing data comprehensively to assess risk.

4. Wealth Management

AI-driven robo-advisors provide automated, personalized investment advice and portfolio management based on individual financial goals and risk tolerance. AI tools help customers with financial planning by analyzing their financial situation and suggesting strategies to achieve their goals.

5. Regulatory Compliance

AI systems monitor transactions and operations continuously to ensure compliance with regulatory standards, reducing the risk of non-compliance. AI helps in streamlining regulatory reporting and compliance processes, making it easier and more efficient to adhere to evolving regulations.

6. Process Automation

AI-powered RPA automates repetitive tasks such as data entry, transaction processing, and report generation, improving efficiency and reducing operational costs. AI facilitates the use of smart contracts on blockchain platforms, automating various banking processes such as loan disbursement and settlement.

7. Marketing and Sales

AI analyzes customer data to create targeted marketing campaigns, improving conversion rates and customer acquisition. AI provides personalized product recommendations based on customers' financial behavior and preferences, enhancing cross-selling and up-selling opportunities.

8. Customer Relationship Management (CRM)

AI analyzes customer data to generate insights into their preferences, behaviour, and needs, helping banks tailor their services and products accordingly. AI tools analyze customer feedback and sentiment across various channels, providing valuable insights into customer satisfaction and areas for improvement.

9. Financial Forecasting and Planning

AI helps banks forecast market trends, customer demand, and financial performance by analyzing historical data and identifying patterns. AI tools assist

banks in budgeting and financial planning by providing data-driven insights and recommendations.

10. Enhanced Security

AI-driven biometric systems such as facial recognition, voice recognition, and fingerprint scanning enhance security and provide a seamless user experience. AI analyzes user behavior, such as typing patterns and mouse movements, to detect and prevent unauthorized access.

11. Loan and Credit Management

AI speeds up the loan processing cycle by automating application assessment and decision-making. AI systems continuously monitor customers' credit profiles and provide alerts and recommendations for maintaining good credit health.

12. Financial Inclusion

AI assesses the creditworthiness of individuals with limited credit history by analyzing alternative data sources such as utility payments and social media activity, facilitating access to credit. AI helps banks develop and deliver microfinance solutions to underserved populations, promoting financial inclusion.

2.4.4 Importance of AI in Banking

AI's significance in the banking sector is multilayered, addressing various challenges and driving substantial improvements in efficiency, customer experience, risk management, and innovation. The importance of AI in banking are as follows

1. Enhanced Efficiency and Productivity:

AI automates repetitive and time-consuming tasks such as data entry, transaction processing, and compliance checks, allowing employees to focus on more strategic activities. AI streamlines and optimizes banking processes, reducing turnaround times and operational bottlenecks, thus improving overall productivity.

2. Improved Customer Experience:

AI analyzes customer data to offer personalized financial products and services, enhancing customer satisfaction and loyalty. Also, AI-powered chatbots

and virtual assistants provide round-the-clock support, handling inquiries and transactions efficiently, improving accessibility and convenience for customers.

3. Advanced Fraud Detection and Security:

AI systems monitor transactions in real-time, identifying unusual patterns, and potentially fraudulent activities, thereby enhancing security. AI uses predictive analytics to anticipate and prevent fraudulent activities before they occur, reducing financial losses and maintaining customer trust.

4. Superior Risk Management:

AI models analyze vast amounts of data to assess credit risk more accurately, helping banks make informed lending decisions. AI enables better prediction of market trends and economic shifts, aiding in proactive risk management and strategic planning.

5. Cost Reduction:

By automating routine tasks and optimizing processes, AI helps reduce operational costs. AI-driven insights enable banks to allocate resources more efficiently, focusing on areas with the highest impact on growth and profitability.

6. Regulatory Compliance:

AI ensures continuous monitoring of transactions and operations for compliance with regulatory standards, reducing the risk of non-compliance and associated penalties. AI-powered RegTech solutions streamline regulatory reporting and compliance processes, making it easier for banks to adhere to evolving regulations.

7. Innovation and Competitive Advantage:

AI facilitates the creation of innovative financial products and services tailored to customer needs and market demands. Banks leveraging AI can differentiate themselves by offering superior customer experiences, advanced security features, and innovative solutions, gaining a competitive edge in the market.

8. Data-Driven Decision Making:

AI analyzes vast amounts of data to provide actionable insights, enabling banks to make informed decisions and strategies. AI helps banks anticipate future trends and customer behaviors, allowing for proactive management and strategic planning.

9. Enhanced Customer Relationship Management:

AI tools analyze customer feedback and sentiment, helping banks understand customer needs and preferences better. AI-driven analytics enable banks to design and implement targeted marketing campaigns, improving customer acquisition and retention.

10. Financial Inclusion:

AI-powered solutions can extend banking services to underserved and unbanked populations, promoting financial inclusion. AI assesses the creditworthiness of individuals with limited credit history, facilitating access to microloans and other financial services.

2.4.5 Banking reimagined with AI

Banks can meet rising customer expectations by applying AI to offer intelligent propositions and smart servicing that can seamlessly embed in partner ecosystems. From instantaneous translation to conversational interfaces, artificial- intelligence (AI) technologies are making ever more evident impacts on our lives. This is particularly true in the financial-services sector, where challengers are already launching disruptive AI-powered innovations. To remain competitive, incumbent banks must become ―AI first‖ in vision and execution, and as discussed in our previous article,this means transforming the full capability stack, including the engagement layer, AI-powered decision making, core technology and data infrastructure, and operating model. If fully integrated, these capabilities can strengthen engagement significantly, supporting customers‘ financial activities across diverse online and physical contexts with intelligent, highly personalized solutions delivered through an interface that is intuitive, seamless, and fast. These are the baseline expectations for an AI bank.

Three elements with potential to give the bank a decisive competitive edge:

1. *The value of re-imagined customer engagement:* By reimagining customer engagement, banks can unlock new value through better efficiency, expanded market access, and greater customer lifetime value.

2. *Key elements of the re-imagined engagement layer:* The combination of intelligent propositions, seamless embedding within partner ecosystems, and smart servicing and experiences underpins an overall experience that sets the AI bank apart from traditional incumbents.

3. *Integrated supporting capabilities:* As banks rethink and rebuild their engagement capabilities, they need to leverage critical enablers, each of which cuts across all four layers of the capability stack.

The value of reimagined customer engagement

In recent years, many financial institutions have devoted significant capital to digital-and-analytics transformations, aiming to improve customer journeys across mobile and web channels. Despite these big investments, most banks still lag well behind consumer-tech companies in their efforts to engage customers with superior service and experiences. The prevailing models for bank customer acquisition and service delivery are beset by missed cues: incumbents often fail to recognize and decipher the signals customers leave behind in their digital journeys.

Across sectors, however, leaders in delivering positive experiences are not just making their journeys easy to access and use but also personalizing core journeys to match an individual‘s present context, direction of movement, and aspiration.

Creating a superior experience can generate significant value. A McKinsey survey of US retail banking customers found that at the banks with the highest degree of reported customer satisfaction, deposits grew 84 percent faster than at the banks with the lowest satisfaction ratings

Three trends make it imperative for banks to improve customer engagement:

1. Rising customer expectations

Accustomed to the service standards set by consumer internet companies, today‘s customers have come to expect the same degree of consistency, convenience, and personalization from their financial-services institutions. For example, Netflix has been able to raise the bar in customer experience by doing well on three crucial attributes: consistency of experience across channels (mobile app, laptop, TV), convenient access to a vast reserve of content with a single click, and recommendations finely tailored to each profile within a single account. Improving websites and online portals for a seamless experience is one of the top three areas where customers desire support from banks.Innovation leaders are already executing transactions and loan approvals and resolving service inquiries in near real time.

2. Disintermediation

Nonbank providers are disintermediating banks from the most valuable services, leaving less profitable links in the value chain to traditional banks. Big-tech companies are providing access to financial products within their nonbanking ecosystems. Messaging app WeChat allows users in China to make a payment within the chat window. Google has partnered with eight US banks to offer cobranded accounts that will be mobile first and focus on creating an intuitive user experience and new ways to manage money with financial insights and budgeting tools.

Beyond access, nonbank innovators are also disintermediating parts of the value chain that were once considered core capabilities of financial institutions, including underwriting. Indian agtech company Cropin uses advanced analytics and machine learning to analyze historical data on crop performance, weather patterns, land usage, and more to develop underwriting models that predict a customer‘s creditworthiness much more accurately than traditional risk models.

3. Increasingly human-like formats

Conversational interfaces are becoming the new standard for customer engagement. With approximately one third of adult Americans owning a smart speaker, voice commands are gaining traction, and adoption of both voice and video

interfaces will likely expand as in-person interactions continue to decline. Several banks have already launched voice-activated assistants, including Bank of America with Erica and ICICI bank in India with iPal.

If reimagined customer engagement is properly aligned with the other layers of the AI-and-analytics capability stack, it can strengthen a bank‘s competitive position and financial performance by increasing efficiency, access and scale, and customer lifetime value

Let’s Sum Up

Artificial Intelligence (AI) is an increasingly important technology for the banking sector. When used as a tool to power internal operations and customer-facing applications, it can help banks improve customer service, fraud detection and money and investment management.

The future of AI in banking is set to be transformative, with advancements expected to significantly enhance the industry.

AI-powered chatbots and virtual assistants provide 24/7 customer support, handling inquiries, processing transactions, and providing information efficiently.

AI systems monitor transactions and operations continuously to ensure compliance with regulatory standards, reducing the risk of non-compliance.

AI helps banks forecast market trends, customer demand, and financial performance by analyzing historical data and identifying patterns.

AI's significance in the banking sector is multilayered, addressing various challenges and driving substantial improvements in efficiency, customer experience, risk management, and innovation.

Banks can meet rising customer expectations by applying AI to offer intelligent propositions and smart servicing that can seamlessly embed in partner ecosystems.

CHECK YOUR PROGRESS – QUIZ- 8

1. How is banking reimagined with AI?

   a. By relying solely on human intervention

   b. By implementing AI-driven solutions for personalized banking experiences and automated processes

   c. By reducing technology integration By focusing on traditional banking methods

2. Why is AI important in banking?

   a. It reduces operational efficiency

   b. It increases costs

   c. It provides enhanced data analysis, customer service, and operational efficiency

   d. It decreases transaction speed

3. Which is an application of AI in banking?

   a. Manual transaction processing

   b. Automated chatbots for customer service

   c. Traditional ledger maintenance

   d. Human-only loan approvals

4. What is the future potential of AI in banking?

   a. Reducing automation

   b. Enhancing predictive analytics, fraud detection, and personalized services

   c. Limiting customer interaction

   d. Increasing manual banking processes

5. How is banking reimagined with AI?

   a. By relying solely on human intervention

   b. By implementing AI-driven solutions for personalized banking experiences and automated processes

   c. By reducing technology integration

   d. By focusing on traditional banking methods

Answers :

1. b. By implementing AI-driven solutions for personalized banking experiences and automated processes
2. c. It provides enhanced data analysis, customer service, and operational efficiency
3. b. Automated chatbots for customer service
4. b. Enhancing predictive analytics, fraud detection, and personalized services
5. b. By implementing AI-driven solutions for personalized banking experiences and automated processes

SECTION 2.5: CLOUD BANKING

2.5.1 Cloud Banking

Cloud banking refers to the use of cloud computing technologies to deliver banking services over the internet. This involves storing data, hosting applications, and running various banking operations on remote servers managed by cloud service providers, rather than on-premises hardware.

2.5.2 Benefits in switching to Cloud Banking

1. **Data Storage:** Customer data, transaction records, and other critical information are stored on cloud servers.

2. **Application Hosting:** Banking applications, including online banking platforms, mobile apps, and back-end systems, are hosted on the cloud.

3. **Infrastructure Management:** The underlying infrastructure, including servers, networks, and storage, is managed by the cloud service provider.

4. **Service Delivery:** Banking services are delivered to customers through the internet, allowing for greater accessibility and flexibility.

Types of Cloud Deployment Models:

1. **Public Cloud:** Services are provided over the internet and shared across multiple organizations. It offers cost-efficiency and scalability.

2. **Private Cloud:** Services are dedicated to a single organization, providing greater control and security. It can be hosted on-premises or by a third-party provider.

3. **Hybrid Cloud:** A combination of public and private clouds, allowing banks to balance security, performance, and cost.

Features of Cloud Banking:

1. **Scalability:** The ability to scale resources up or down based on demand, without significant upfront investment.

2. **Flexibility:** Banks can quickly deploy and update applications, responding swiftly to market changes and customer needs.
3. **Cost Efficiency:** Reduced need for physical hardware and maintenance lowers operational costs.
4. **Accessibility:** Services can be accessed from anywhere, facilitating remote work and enhancing customer convenience.
5. **Security:** Advanced security measures implemented by cloud providers, including encryption, access control, and regular security updates.

Cloud banking represents a significant shift from traditional banking models, leveraging the power of cloud technology to enhance operational efficiency, improve customer experience, and drive innovation in the financial industry.

Let's Sum Up

Cloud banking refers to the use of cloud computing technologies to deliver banking services over the internet. This involves storing data, hosting applications, and running various banking operations on remote servers managed by cloud service providers, rather than on-premises hardware.

Customer data, transaction records, and other critical information are stored on cloud servers.

The underlying infrastructure, including servers, networks, and storage, is managed by the cloud service provider.

Cloud banking represents a significant shift from traditional banking models, leveraging the power of cloud technology to enhance operational efficiency, improve customer experience, and drive innovation in the financial industry.

CHECK YOUR PROGRESS – QUIZ - 9

1. What is cloud banking?
    a. Traditional on-premises banking infrastructure
    b. The use of cloud computing technology to deliver banking services
    c. Manual data stor
    d. Centralized banking systems
2. What is a benefit of switching to cloud banking?
    a. Increased hardware costs

b. Improved scalability, flexibility, and cost-efficiency
c. Decreased data security
d. Limited access to banking services

3. Which of the following is not a type of cloud server?
a) Public Cloud Servers
b) Private Cloud Servers
c) Dedicated Cloud Servers
d) Merged Cloud Servers
4. An internal cloud is…
a. an overhanging threat
b. a career risk for a cio
c. a cloud that sits behind a corporate
d. the group of knowledge workers who use a social network for water- cooler gossip
5. Which of the following is essential concept related to Cloud?
a. Reliability
b. Productivity
c. Abstraction
d. all of the mentioned

Answer :

1. b. The use of cloud computing technology to deliver banking services
2. b. Improved scalability, flexibility, and cost-efficiency
3. d. Merged Cloud Servers
4. d. the group of knowledge workers who use a social network for water- cooler gossip
5. c. Abstraction

UNIT SUMMARY

Contemporary developments in banking are driven by rapid technological advancements and evolving regulatory landscapes. Digital banking platforms, including online and mobile apps, have enhanced customer accessibility and convenience. Innovations such as artificial intelligence, blockchain, and machine learning are optimizing operations, improving security, and personalizing services. Fintech solutions are reshaping traditional banking practices, while new payment systems and digital currencies are emerging. Regulatory updates focus on increasing transparency,

security, and consumer protection. Together, these advancements are transforming the banking industry, driving greater efficiency, enhancing customer experiences, and fostering a more competitive and dynamic financial environment.

SELF ASSESSMENT QUESTIONS

1. Discuss the impact of digital transformation on traditional banking services.
2. Analyze the role of fintech innovations such as blockchain and artificial intelligence in modern banking.
3. Evaluate the implications of regulatory changes on contemporary banking practices.
4. Discuss the challenges and opportunities presented by the integration of artificial intelligence (AI) in banking.
5. Examine the role of cybersecurity in contemporary banking.

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UNIT: III INDIAN INSURANCE MARKET

History of Insurance in India – Definition and Functions of Insurance– Insurance Contract – Indian Insurance Market – Reforms In Insurance Sector – Insurance Organisation — Insurance organization structure. Insurance Intermediaries: Insurance Broker –Insurance Agent-Surveyors and Loss Assessors- Third Party Administrators (Health Services) –Procedures-Code of Conduct.

INDIAN INSURANCE MARKET

UNIT OBJECTIVES

The Indian insurance market is one of the fastest-growing sectors in the country, driven by rising incomes, increased awareness of financial protection, and supportive government policies. It is broadly categorized into life insurance and non-life (general) insurance, covering products like health, motor, property, and liability insurance. The market is regulated by the Insurance Regulatory and Development Authority of India (IRDAI), which ensures consumer protection and market stability. Life insurance, led by the Life Insurance Corporation of India (LIC), dominates the sector, accounting for a significant share of the market. Private players have also gained momentum in both life and non-life segments. The general insurance market has seen rapid growth, particularly in health and motor insurance, driven by increasing healthcare costs, rising vehicle sales, and regulatory mandates. Despite its growth, the Indian insurance market remains underpenetrated, with many citizens lacking adequate coverage. This presents a substantial opportunity for expansion, especially in rural areas and among the lower-income population. Digital transformation and innovation through insurtech are helping companies streamline operations, offer personalized products, and improve customer experience.

SECTION 3.1: INDIAN INSURANCE MARKET

3.1.1 History of Insurance in India

Insurance has been known to exist in some form or other since 3000 BC. Various civilisations, over the years, have practiced the concept of pooling and sharing among themselves, all the losses suffered by some members of the community. Let us take a look at some of the ways in which this concept was applied.

Modern insurance in India began in early 1800 or thereabouts, with agencies of foreign insurers starting marine insurance business.

The Oriental Life Insurance Co. Ltd

The first life insurance company to be set up in India was an English company.

Triton Insurance Co. Ltd.

The first non-life insurer to be established in India.

Bombay Mutual Assurance Society Ltd.

The first Indian insurance company. It was formed in 1870 in Mumbai.

National Insurance Company Ltd.

The oldest insurance company in India. It was founded in 1906 and it is still in business.

Many other Indian companies were set up subsequently as a result of the Swadeshi movement at the turn of the century. In 1912, the Life Insurance Companies Act and the Provident Fund Act were passed to regulate the insurance business. The Life Insurance Companies Act, 1912 made it compulsory that premium-rate tables and periodical valuation of companies be certified by an actuary. However, the disparity and discrimination between Indian and foreign companies continued.

The Insurance Act 1938 was the first legislation enacted to regulate the conduct of insurance companies in India. This Act, as amended from time to time continues to be in force. The Controller of Insurance was appointed by the Government under the provisions of the Insurance Act.

1. **Nationalisation of life insurance:** Life insurance business was nationalised on 1st September 1956 and the Life Insurance Corporation of India (LIC) was formed. There were 170 companies and 75 provident fund societies doing life insurance business in India at that time. From 1956 to 1999, the LIC held exclusive rights to do life insurance business in India.

2. **Nationalisation of non-life insurance:** With the enactment of General Insurance Business Nationalisation Act (GIBNA) in 1972, the non-life insurance business was also nationalised and the General Insurance

Corporation of India (GIC) and its four subsidiaries were set up. At that point of time, 106 insurers in India doing non-life insurance business were amalgamated with the formation of four subsidiaries of the GIC of India.

3. **Malhotra Committee and IRDAI:** In 1993, the Malhotra Committee was setup to explore and recommend changes for development of the industry including the reintroduction of an element of competition. The Committee submitted its report in 1994. In 1997 the Insurance Regulatory Authority (IRA) was established. The passing of the Insurance Regulatory& Development Act, 1999 (IRDAI) led to the formation of Insurance Regulatory and Development Authority of India (IRDAI) in April 2000 as a statutory regulatory body both for life, non-life and health insurance industry. IRDA has been subsequently renamed as IRDAI in 2014.

Amending the Insurance Act in 2015, certain stipulations have been added governing the definition and formation of insurance companies in India.

An Indian Insurance company includes a company, —in which the aggregate holdings of equity shares by foreign investors, including portfolio investors, do not exceed forty-nine percent of the paid up equity capital of such Indian insurance company, which is Indian owned and controlled, in such manner as may be prescribed‖.

Amendment to the Insurance Act also stipulates about foreign companies in India, A foreign insurance company can engage in reinsurance through a branch established in India. The term "reinsurance" means the ‗insurance of part of one insurer's risk by another insurer who accepts the risk for a mutually acceptable premium‘.

Life insurance industry today

Currently, there are 24 life insurance companies operating in India as detailed hereunder:

a) Life Insurance Corporation (LIC) of India is a public sector company

b) There are 23 life insurance companies in the private sector

Alphabetical List of 23 Life-Assurance Companies, in the Private-Sector, is as follows:

1. AEGON Life Insurance Company Limited
2. Aviva Life Insurance Company India Limited
3. Bajaj Allianz Life Insurance Company Limited
4. Bharti AXA Life Insurance Company Limited
5. Birla Sun Life Insurance Company Limited
6. Canara H.S.B.C. Oriental Bank of Commerce Life Insurance Company Limited
7. D.H.F.L. Pramerica Life Insurance Company Limited
8. Edelweiss Tokio Life Insurance Company Limited
9. Exide Life Insurance Company Limited
10. Future Generali India Life Insurance Company Limited
11. H.D.F.C. Standard Life Insurance Company Limited
12. I.C.I.C.I. Prudential Life Insurance Company Limited
13. I.D.B.I. Federal Life Insurance Company Limited
14. IndiaFirst Life Insurance Company Limited
15. Kotak Mahindra Old Mutual Life Insurance Company Limited
16. Max Life Insurance Company Limited
17. P.N.B. Metlife India Insurance Company Limited
18. Reliance Nippon Life Insurance Company Limited
19. Sahara India Life Insurance Company Limited
20. S.B.I. Life Insurance Company Limited
21. Shriram Life Insurance Company Limited
22. Star Union Dai-ichi Life Insurance Company Limited
23. Tata A.I.A. Life Insurance Company Limited

c) The postal department, under the Government of India, also transacts life insurance business via Postal Life Insurance, but is exempt from the purview of the regulator.

3.1.2 Definition and Functions of Insurance

Insurance may thus be considered as a process by which the losses of a few, who are unfortunate to suffer such losses, are shared amongst those exposed to similar uncertain events / situations.

There is however a catch here.

i. Would people agree to part with their hard earned money, to create such a common fund?
ii. How could they trust that their contributions are actually being used for the desired purpose?
iii. How would they know if they are paying too much or too little?

Obviously someone has to initiate and organise the process and bring members of the community together for this purpose. That ―someone‖ is known as an ―Insurer‖ who determines the contribution that each individual must make to the pool and arranges to pay to those who suffer the loss.

Functions of Insurance

It is important to understand that an insurance policy has both a financial and an emotional aspect for the policyholder. There are certain functions that an insurance company must promise to take care of while they are finalising the contract with the insured party. The following are the functions of Insurance.

1. **To provide safety and security to the insured**

One of the prime reasons for entering into an insurance contract is to seek financial security in the event of a loss from an unexpected occurrence. Insurance offers support to the policyholder and helps to reduce the uncertainties in the business or in human lives. With the help of a policy, the insured party is protected against future hazards, vulnerabilities and accidents. Although no insurer in the world can prevent the dangerous event from occurring, they can certainly help by providing some sort of financial protection to compensate the insured party.

2. **Protection for your loved ones**

Medical insurance can help people and their family get the right sort of treatment and cover hospitalisation expenses. It helps to take care of their health in

case of an accident, illness or any other unfortunate event. The well be of their family comes before anything, and insurance helps take care of that in the best possible manner.

3. Collective Risks

Another function of an insurance contract is that it helps a number of individuals get an insurance policy to safeguard themselves from the losses that may occur due to an unfortunate event. This strategy works on the principle that not all of the policyholders for a particular risk will face it at the same time. For example, if a total of fifty thousand people are insured against damage to their cars due to accidents, the most likely scenario is that only a few of them would have accidents in a single year. So the amount that they can claim from the insurance company for the financial losses due to the accidents would be adequately covered by the insurance premiums from all fifty thousand policyholders.

4. Risk Assessment

Insurance organisations play an important role in determining the actual amount of risk from the occurrence of a particular event by assessing the situation. They analyse all the aspects of a risk carefully to make an informed decision. It helps them to arrive at the final insurance amount as well as fix the premium to be paid by the insured.

5. Certainty

One of the main benefits of taking a policy for the insured is that they can feel secure about meeting the future losses after taking coverage for a particular risk. It can be very reassuring for the insured party and can also help them to proceed with their daily activities in a much more assured manner without fear or hesitation.

6. It helps to forestall losses

An insurance contract can help the insured to mitigate their losses by providing some sort of security in case of an unforeseen event. It helps businesses have a contingency plan in case things do not go as planned. Insurance is a very important tool for organisations as it allows them to cover their bases while operating in a very risky environment where the losses can be huge if they do not play their

cards right. It also allows them to be able to cover these huge risks in their businesses by paying a relatively small amount as the premium.

7. Fulfil the legal requirements

In some countries, any business is required to have certain insurance covers in order to engage in any economic activity. So the insurance company can help organisations fulfil these requirements.

8. It allows the development of big businesses

Any large-sized organisation is exposed to a greater amount of risk. If the chances of loss are relatively higher, it may prevent the management in those organisations from taking calculated risks, which has the potential of bringing more profits. Insurance helps to mitigate that risk in a way and encourage businesses to take bold decisions. Insurance takes away some of the financial pressures and allows businesses to flourish in the long run.

9. It help in boosting the economy

When the businesses have sufficient insurance cover, they can increase their scope of economic activity that will bring commensurate rewards. This can provide an impetus to the overall economy of a country in the long run.

3.1.3 INSURANCE CONTRACTS

Insurance contract defined, An insurance contract is a contract whereby one undertakes to indemnify another against loss, damage, or liability arising from an unknown or contingent event.

Insurer and insured definition

An insurer is a person who undertakes to indemnify another by an insurance contract and the insured is the person indemnified.

Who may be parties to insurance contract

Anyone who is capable of making a contract, except as restricted by law, may be an insurer, and anyone except a public enemy may be an insured.

Insurable interest defined

An insurable interest is an interest in property, or any relation thereto, or liability in respect thereof, of such a nature that a contemplated peril might damnify directly the insured, and may consist in:

1. an existing interest
2. An inchoate interest founded on an existing interest; or
3. An expectancy coupled with an existing interest in that out of which the expectancy arises.

Insurable interest essential to insurance contract

The sole object of insurance is the indemnity of the insured, and if the insured has no insurable interest, the contract is void.

When insurable interest must exist

An insurable interest must exist when the insurance takes effect and when the loss occurs but need not exist in the meantime.

Measure of insurable interest

The measure of an insurable interest in property is the extent to which the insured might be damnified by loss or injury of the property.

Carrier or depositary has insurable interest

A carrier or depositary of any kind has an insurable interest in a thing held by the carrier or depositary as such to the extent of its value.

Insurable interest in personal insurance

1. An individual of competent legal capacity may procure or effect an insurance contract upon that individual's own life or body for the benefit of any person. A person may not procure or cause to be procured an insurance contract upon the life or body of another individual unless the benefits under the contract are payable to the individual insured or that individual's personal representatives, or to a person having, at the time the contract was made, an insurable interest in the individual insured.

2. If the beneficiary, assignee, or other payee under a contract made in violation of this section receives from the insurer any benefits from the contract upon the death, disablement, or injury of the individual insured, the individual insured or that individual's executor or administrator may maintain an action to recover the benefits from the person receiving the benefits.

3. "Insurable interest", with reference to personal insurance, includes only the following interests:

a. In the case of an individual related closely by blood or by law, a substantial interest engendered by love and affection.

b. In the case of a person other than an individual described in subdivision a, a lawful and substantial economic interest in having the life, health, or bodily safety of the individual insured continue, as distinguished from an interest that would arise only by, or would be enhanced in value by, the death, disablement, or injury of the individual insured.

c. In the case of an individual party to a contract or option for the purchase or sale of an interest in a business partnership or firm, of a membership interest in a limited liability company, or of shares of stock of a closed corporation or of an interest in the shares, an interest in the life of each individual party to the contract for the purpose of the contract only, in addition to an insurable interest that may otherwise exist as to the life of the individual.

d. In the case of a religious, educational, eleemosynary, charitable, or benevolent organization, a lawful interest in the life of the individual insured if that individual executed a written consent to the insurance contract.

e. In the case of an employer or the trustee of a trust providing life, health, disability, retirement, or similar benefits to employees of one or more employers, and acting in a fiduciary capacity with respect to the employees, retired employees, or the employees' dependents or

beneficiaries, an employer or the trustee of a trust has an insurable interest in the lives of employees for whom the benefits are to be provided and the employer or trustee of a trust may purchase, accept, or otherwise acquire an interest in personal insurance as a beneficiary or owner. Written consent of the insured individual is required if the personal insurance purchased names the employer or the trustee of a trust as a beneficiary.

f. In the case of a service recipient or the trustee of a trust providing a nonqualified deferred compensation plan, as defined by section 409A(d)(1) of the Internal Revenue Code [26 U.S.C. 409A(d)(a)], to a service provider, an insurable interest in the life of the service provider for whom the nonqualified deferred compensation plan is provided. The service recipient or the trustee of a trust may purchase, accept, or otherwise acquire an interest in personal insurance with the trust as a beneficiary or owner. Written consent of the insured individual is required. As used in this subdivision:

(1) "Service provider" means an individual, other than an employee, who provides significant services to a service recipient.

(2) "Service recipient" means the entity for which services are performed by a service provider.

Contingent or expectant interest not insurable

A mere contingent or expectant interest in anything, not founded on an actual right to the thing nor upon any valid contract for it, is not insurable.

What may be insured against

Any contingent or unknown event, whether past or future, which may damnify a person having an insurable interest or create a liability against the person may be insured against, subject to this title, with the exception of an insurance for or against the drawing of any lottery or for or against any chance or ticket in a lottery drawing a prize.

Effect of change in insurable interest

A change of interest in any part of a thing insured, unaccompanied by a corresponding change of interest in the insurance, suspends the insurance to an equivalent extent until the interest in the thing insured and the interest in the insurance are vested in the same person, except as follows:

In the cases of life, accident, and health insurance.

1. A change of interest in a thing insured after the occurrence of an injury which results in a loss does not affect the right of the insured to indemnity for the loss.
2. A change of interest in one or more of several distinct things insured by one policy does not avoid the insurance as to the others. A change of interest by will or succession on the death of the insured does not avoid an insurance, and the decedent's interest in the insurance passes to the person taking the decedent's interest in the thing insured.
3. A transfer of interest by one of several partners, joint owners, or owners in common who are insured jointly to the others does not avoid an insurance even though it has been agreed that the insurance shall cease upon an alienation of the thing insured.
4. The encumbering of one or more of several distinct things insured by one policy does not render void any insurance upon the things not covered by the encumbrance, but in case of loss or damage, such an amount must be deducted from the insurance as the value of the property so encumbered bears to the value of all the property covered by the policy.

Any agreement to waive subsection 3 or 6 is void.

Mutual disclosures required in insurance contract

Each party to an insurance contract shall communicate to the other in good faith all facts within the party's knowledge which are or which the party believes to be material to the contract and which the other party has not the means of ascertaining and as to which the party makes no warranty.

Concealment defined

"Concealment" means a neglect to communicate that which a party knows and ought to communicate.

Rescission for concealment - Exception

A concealment, whether intentional or unintentional, entitles the injured party to rescind an insurance contract. An intentional and fraudulent omission on the part of one insured to communicate information of matters proving or tending to prove the falsity of a warranty entitles the insurer to rescind. This section does not apply to automobile insurance policies, but such policies are subject to cancellation as provided in section 26.1-40-02.

Matters as to which disclosure is not required

Neither party to an insurance contract is bound to communicate information of the matters following, except in answer to the inquiries of the other:

1. Those that the other knows.
2. Those that in the exercise of ordinary care the other ought to know and the former has no reason to suppose the other ignorant.
3. Those that the other waives communication.
4. Those that prove or tend to prove the existence of a risk excluded by a warranty and which are not otherwise material.
5. Those that relate to a risk excepted from the policy and are not otherwise material.

Materiality of matters - How determined

Materiality is to be determined not by the event, but solely by the probable and reasonable influence of the facts upon the party to whom the communication is due in forming the party's estimate of the disadvantages of the proposed contract or in making the party's inquiries.

Presumption of knowledge

Each party to an insurance contract is bound to know all the general causes which are open to the party's inquiry equally with that of the other and which may affect either the political or material perils contemplated and all general usages of trade.

Communication of material facts may be waived

The right to information of material facts may be waived, either by the terms of insurance or by neglect to make inquiries as to such facts, when they distinctly are implied in other facts of which information is communicated.

Matters of opinion need not be disclosed

Neither party to an insurance contract is bound to communicate, even upon inquiry, information of the party's own judgment upon the matters in question.

Representation - Form - When made. A representation, either oral or written, may be made before or at the time of issuing the policy.

Interpretation of representations regarding insurance

A representation is to be interpreted by the general rules of contract interpretation. A representation as to the future is a promise unless the representation appears that it was merely a statement of belief or expectation. A representation cannot qualify an express provision in an insurance contract, but it may qualify an implied warranty.

False representation - Materiality and effect

A representation is false when the facts fail to correspond with its assertions or stipulations. If a representation is false in a material point, whether affirmative or promissory, the injured party is entitled to rescind the contract from the time when the representation becomes false. The materiality of a representation is determined by the same rule which determines the materiality of a concealment.

Misrepresentations - Determination of materiality - Effect

An oral or written misrepresentation made in the negotiation of an insurance contract or policy by the insured or in the insured's behalf is material or defeats or avoids the policy or prevents its attaching only if the misrepresentation has been made with actual intent to deceive or unless the matter misrepresented increased the risk of loss.

Representations on information and belief

When a person insured has no personal knowledge of a fact, the person may repeat information which that person has upon the subject and which that person

believes to be true with the explanation that that person does so on the information of others, or that person may submit the information in its whole extent to the insurer. In neither case is the person responsible for the truth of the representation unless it proceeds from an insurance producer of the insured who has a duty to give the information.

Time to which representation refers

A representation must be presumed to refer to the time of the completion of the insurance contract.

Alteration or withdrawal of representation

A representation may be altered or withdrawn before the effective date of the insurance but not afterwards.

Let's Sum Up

Insurance has been known to exist in some form or other since 3000 BC. Various civilisations, over the years, have practiced the concept of pooling and sharing among themselves, all the losses suffered by some members of the community.

The Babylonian traders had agreements where they would pay additional sums to lenders, as a price for writing off of their loans, in case a shipment was lost or stolen.

Life insurance business was nationalised on 1st September 1956 and the Life Insurance Corporation of India (LIC) was formed.

General Insurance Business Nationalisation Act (GIBNA) in 1972, the non-life insurance business was also nationalised and the General Insurance Corporation of India (GIC) and its four subsidiaries were set up.

Insurance may thus be considered as a process by which the losses of a few, who are unfortunate to suffer such losses, are shared amongst those exposed to similar uncertain events / situations.

An insurance contract is a contract whereby one undertakes to indemnify another against loss, damage, or liability arising from an unknown or contingent event.

CHECK YOUR PROGRESS – QUIZ - 10

1. When was the Life Insurance Corporation (LIC) of India established?
   a. 1947
   b. 1956
   c. 1965
   d. 1972
2. What was the first insurance company established in India?
   a. Life Insurance Corporation of India
   b. Oriental Life Insurance Company
   c. New India Assurance Company
   d. General Insurance Corporation of India
3. What is the primary function of insurance?
   a. To eliminate risks
   b. To provide a guarantee against financial loss
   c. To increase savings
   d. To provide investment returns
4. Insurance is defined as:
   a. The process of saving money for future use
   b. A contract in which one party agrees to indemnify another against loss
   c. A method of avoiding risk
   d. A means of generating income through investments
5. Which of the following is NOT a fundamental element of an insurance contract?
   a. Offer and acceptance
   b. Consideration
   c. Premium
   d. Refund policy

Answers :

1. b. 1956
2. b. Oriental Life Insurance Company
3. b. To provide a guarantee against financial loss

4. b. A contract in which one party agrees to indemnify another against loss
5. d. Refund policy

SECTION 3.2: INDIAN INSURANCE MARKET

3.2.1 Indian Insurance Market

The world outlook has changed significantly since 2021. After navigating the COVID-19 pandemic, the global economy faces several challenges including supply chain bottlenecks, the Ukraine-Russia conflict, an energy crisis and high inflation. There will be some spill over to India‘s economy in the near term and, after a strong recovery to 8.7% growth in 2021 from the pandemic-induced slump, we estimate that real gross domestic product (GDP) growth will slow to 7.0% in 2022 and to 5.4% in 2023. Inflation will remain a near term concern. We estimate CPI inflation of 6.9% in 2022, the main drivers including high energy and commodity prices, disruptions to supply chains, rupee weakness and interest rate hikes in advanced economies. All told, we remain positive on India‘s medium- to long-term outlook: we forecast average annual real GDP growth of 6.7% in the 10 years to 2032.

India is one of the fastest growing insurance markets in the world, and we forecast that it will be the sixth largest by 2032. It estimate that total insurance premiums will grow on average by 14% annually in nominal local currency terms (9% per annum in real terms) over the next decade. We forecast that life insurance premiums will grow by 9% annually (in real terms) by 2032, making India the fifth largest life market globally. COVID-19 has generated increased risk awareness and demand for life insurance. Regulatory developments and digitalisation should also support sector growth.

They estimate that non-life insurance premiums will continue to grow in 2022 and 2023, but at a slower pace due to the Russia-Ukraine war and high inflation. Health is the largest line of business in the non-life sector, followed by motor and agriculture. Health premiums grew by 22.5% in 2021, mainly due to a pandemic-related push in demand. They estimate motor premiums will grow by 2.9% in real terms in 2022, mainly due to a rebound in economic activity and higher mobility post pandemic.

India is exposed to a wide range of natural catastrophes including earthquakes, tropical cyclone, floods and wildfires. Many parts of the country are vulnerable to more than one peril. The natural catastrophe protection gap in India was 95%, or USD 2.61 billion, in 2021, one of the highest in the world and significantly above the emerging markets‘ average. With respect to climate change effects, rising temperatures are leading to more intense rainfall and higher drought risk. Innovative re/insurance solutions such as parametric or index-based insurance can play an important role in helping to bridge this protection gap by making insurance products more affordable and accessible.

A series of regulatory developments are being introduced in India to improve insurance penetration, increase capital inflow, improve valuation, and facilitate the entry of small, specialised and niche players. The regulator is pushing for reforms to develop India as a reinsurance hub. The government has raised the limit on foreign direct investment in the insurance sector to 74% from 49%, and the insurance regulator is planning to introduce risk-based capital (RBC) requirements. The regulator has also suggested amendments to the existing regulatory sandbox that could foster further innovation in the sector.

3.2.2 Reforms of Insurance Sector in India

In 1993, the Malhotra committee was led by the RBI governor and the former finance secretary. The main objective of the committee was to create a better financial system. Some of the recommendations that were kept were:

- In every insurance company, the government should have a stake of 50%
- If private companies enter the market, they should have a capital of 1 billion rupees.
- One company can either deal with general insurance or with life insurance.
- There should be a tie up between foreign and domestic companies in order to get the foreign companies in the Indian market.
- Changes should be made in the insurance act
- A regulatory body for the insurance sector should be made.

Challenges and Opportunities Faced by the Insurance Industry

There are many challenges and opportunities for the insurance sector in India, some of the challenges are given below:

1. Low Insurance Penetration

It has been a problem that has been lying in the insurance sector for more than a decade. Life insurance companies are basically privately owned and focus on urban areas. After the introduction of IRDA in 1991, this challenge was starting to go down as the objective of IRDA was to regulate the insurance sector.

2. Lack of Adequate Capital Requirements

As one can say, low penetration will definitely lead to low capital funds. Low capital funds thus lead to the non-expansion of the insurance sector. So to create a boost in the insurance sector, the foreign direct investment was increased from 49% to 74%. This is an important reform in the insurance sector in India.

Opportunities for insurance sector in India

1. Social Approach

As we all know that social media has a huge market, so it is a great opportunity for insurance companies because as they advertise their insurance through social media apps then it is sure that it will help them in bringing out more people in their insurance companies.

2. Awareness Programs

Insurance sector companies should hold awareness programs that will definitely create awareness regarding insurance and let people know what insurance really is because there are many misleading points on insurance.

Let's Sum Up

There will be some spill over to India's economy in the near term and, after a strong recovery to 8.7% growth in 2021 from the pandemic-induced slump, we estimate that real gross domestic product (GDP) growth will slow to 7.0% in 2022 and to 5.4% in 2023.

India is one of the fastest growing insurance markets in the world, and we forecast that it will be the sixth largest by 2032.

A series of regulatory developments are being introduced in India to improve insurance penetration, increase capital inflow, improve valuation, and facilitate the entry of small, specialised and niche players.

In 1993, the Malhotra committee was led by the RBI governor and the former finance secretary. The main objective of the committee was to create a better financial system.

There are many challenges and opportunities for the insurance sector in India, Low Insurance Penetration and Lack of Adequate Capital Requirements.

Opportunities for insurance sector in India**,** Social Approach and Awareness Programs.

CHECK YOUR PROGRESS – QUIZ - 11

1. In insurance terminology, the term 'premium' refers to:
   a. The policyholder
   b. The amount paid by the insured to the insurer
   c. The insurer
   d. The claim amount
2. Which committee recommended the liberalization of the insurance sector in India?
   a. Narasimham Committee
   b. Malhotra Committee
   c. Rangarajan Committee
   d. Gadgil Committee
3. In which year was the Insurance Regulatory and Development Authority of India (IRDAI) established?
   a. 1999
   b. 2000
   c. 2001
   d. 2002
4. Which of the following is a public sector insurance company in India?
   a. ICICI Lombard
   b. HDFC ERGO
   c. New India Assurance

d. Bajaj Allianz

5. The hierarchical structure of an insurance organization typically includes:

a. Agents, brokers, and surveyors

b. Top management, middle management, and operational staff

c. Policyholders and claimants

d. Banks and financial institutions

Answers :

1. b. The amount paid by the insured to the insurer
2. b. Malhotra Committee
3. a. 1999
4. c. New India Assurance
5. b. Top management, middle management, and operational staff

SECTION 3.3: INSURANCE ORGANIZATION

3.3.1 Insurance Organization

Insurance as security is need of all human beings. No animal, no plant nor mountains and oceans want any security, like man does. Man is afraid of uncertainty, fears and death. Although a reality, one day each one will die; early or later, timely or untimely is the question, which has no answer. He is afraid of risk & losses in future. He is ever in search of security & certainty. In early history man lived in-groups and communities to be secure.

At the earlier stage, whenever an earning member would die due to disease or death, the other members of the social group (or family or clan) would contribute to bail the survivors in the family out of financial difficulties. This contribution was in the shape of food- clothing and shelter. Even today we donate money, food, clothing and other materials of life to rehabilitate the family whose breadwinner has left for his heavenly abode, unfortunately, suddenly, sadly. (Also people, friends, relatives even today contribute towards marriage, education, healthcare expenses or mishap).

Later, as commercial considerations grew stronger and stronger; nucleus family growth became a common practice these contributions and sharing started becoming individualistic and took the shape of _premium‘. The _assurances‘ which were earlier by will and practice became a commodity (though intangible). Thus the

concept of Insurance grew. Any person who would not contribute, or would contribute less according to his paying capacity was denied reciprocal help or promise of help, or was given help in proportion to his contribution which he had been contributing as a faithful obedient member of the society.

In earlier days, in India, on an unexpected death of breadwinner in any family, the villagers or neighbourhood would collect funds to help the survive in the family and such practice continues even now. Today also, when after death — —Bhogǁ or

—Kiryaǁs takes place, relatives give money to the survivors though this may not be adequate collection to meet expenses of remaining part of life when there is no breadwinner. Insurance is on similar pattern.

An insurance organization is a company that provides various types of insurance policies to individuals and businesses. These policies can include life insurance, health insurance, property and casualty insurance, auto insurance, and more. The main functions of an insurance organization typically include:

1. Risk Assessment

Evaluating the risk associated with insuring a person or property and determining the appropriate premium.

2. Policy Issuance

Creating and issuing insurance policies that outline the terms and conditions of coverage.

3. Premium Collection

Collecting payments from policyholders.

4. Claims Processing

Handling claims submitted by policyholders and paying out benefits as stipulated in the policy.

5. Customer Service

Providing support and assistance to policyholders regarding their policies, claims, and other inquiries.

6. Regulatory Compliance

Ensuring that the organization complies with all relevant laws and regulations governing insurance.

Insurance organizations can be structured as mutual companies, where policyholders own the company, or as stock companies, where shareholders own the company. They may also operate in various sectors, such as life insurance, health insurance, and property and casualty insurance.

PURPOSE OF INSURANCE

Every human being has fear in his mind. The fear whether he will be able to meet the basic needs of the life i.e. Food, Clothing and Housing. He has fear not only for himself but also for his dependents. The source of income to meet his basic needs may be through service or business. If he is able to meet his basic needs then he acquires the assets i.e. vehicles, property or jewellery etc. Then he gets additional fear of saving the assets from destruction.

As you know, the old age and death is certain for every human being while the accident, illness, disability and destruction of assets may be by random. The number of accidents will take place but with whom is uncertain. Therefore, to overcome this problem, the Insurance plays a very important role.

The principal source of income of an individual comes from the compensation for work performed by him. If this source of income gets cut off then.

Family will make social and economic adjustments like:

1. Wife may take employment at the cost of home making responsibilities
2. Children may have to go for work at the cost of education.
3. Family members might have to accept charity from relatives, friends etc. at the cost of their independence and self-respect.
4. Family standard of living might have to be reduced to a level below the essentials for health and happiness.

The basic threats which all of us may encounter to varied extent and which result in cut off of income or sudden increase in - uncalled for expenses (beyond our means or higher than our earnings) i.e. dislocates the human life, are: -

- ILLNESS (malnutrition, environment, chronic) – uncertain
- ACCIDENT – (uncertain)
- Disability – Permanent or Temporary (uncertain)
- OLD AGE – (certain)
- DEATH – (certain)
- LIFE INSURANCE is an arrangement through which a person can plan for the continuation of income when uncertainties and certainties (i.e.) illness or Accident and death or old age disrupt or destroy his ability to earn his livelihood.

Therefore the Insurance is:

1. The business of insurance is related to protection of human life, human created assets, human disability and business liabilities possessed by human beings which have a definite value, and
2. Assets and human life generate benefit and income for the owner and his/her family members, and
3. Loss of assets / human life for any reason stops the benefits and income to the owner and family members respectively, and
4. Results in falling of living standards in the family, quality of life and future growth of the associated family members, and
5. Insurance is a mechanism that helps to reduce such adverse consequences through pooling, spreading and sharing of risk.

Thus life insurance business is complimentary to the Government efforts in social management.

The purpose of insurance is to provide financial protection and peace of mind by mitigating the impact of unforeseen events and risks.

Purposes of insurance:

1. Risk Management

Insurance helps individuals and businesses manage and transfer the financial risk of potential losses. By paying a relatively small premium, policyholders can protect themselves against significant financial losses.

2. Financial Security

Insurance provides a safety net, ensuring that policyholders and their dependents are financially secure in the event of accidents, illnesses, property damage, or other covered incidents.

3. Asset Protection

Insurance safeguards valuable assets, such as homes, cars, and businesses, from potential damage or loss due to events like fires, theft, natural disasters, or accidents.

4. Legal Compliance

Certain types of insurance, such as auto insurance or workers' compensation insurance, are legally required. Having these insurances ensures compliance with laws and regulations.

5. Business Continuity

For businesses, insurance helps maintain operations by covering losses due to events like property damage, liability claims, or business interruptions.

6. Social Stability

By providing financial support in times of crisis, insurance contributes to overall social stability and economic health, reducing the burden on government resources and social safety nets.

7. Encouraging Savings and Investment

Certain insurance products, like whole life or endowment policies, can serve as a savings or investment vehicle, providing future financial benefits along with coverage.

8. Peace of Mind

Knowing that they are protected against potential financial losses, policyholders can have greater peace of mind and focus on their personal and professional lives without constant worry about unforeseen risks.

NEED OF INSURANCE

(a) To provide Security and Safety

The Life Insurance provides security against premature death and payment in old age to lead the comfortable life. Similarly in general Insurance, the property can be insured against any contingency i.e. fire, earthquake etc.

(b) To provide Peace of Mind

The uncertainty due to fire, accident, death, illness, disability in the human life, it is beyond the control of the human beings. By way of Insurance, he may be compensated financially but not emotionally. The financial compensation provides not only peace of mind but also motivates to work more and more.

(c) To Eliminate Dependency

On the death of the breadwinner, the consequences need not be explained. Similar to the destruction of property and goods the family would suffer a lot. It could lead to reduction in the standard of living or begging from relatives, friends or neighbours. The economic independence of the family is reduced. The Insurance is the only way to assist and provider them adequate at the time of sufferings.

(d) To Encourage Savings

Life Insurance provides protection and investment while general Insurance provides only protection to the human life and property respectively. Life Insurance provides systematic saving because once the policy is taken then the premium is to be regularly paid otherwise the amount will be forfeited.

(e) To fulfill the needs of a person

a) Family needs

b) Old age needs

c) Re-adjustment needs

d) Special needs: Education, Marriage, health

e) The clean up needs: After death, ritual ceremonies, payment of wealth tax and income taxes are certain requirements, which decreases the amount of funds of the family members.

(f) To Reduce the Business Losses:

In business the huge amount is invested in the properties i.e. Building and Plant and Machinery. These properties may be destroyed due to any negligence, if it is not insured no body would like to invest a huge amount in the business and industry. The Insurance reduced the uncertainty of business losses due to fire or accidents etc.

(g) To Identify the Key man:

Key man is a particular man whose capital, expertise, energy and dutifulness make him the most valuable asset in the business and whose absence well reduce the income of the employer tremendously and upto that time when such employee is not substituted. The death or disability of such valuable lives will prove a more serious loss than that fire or any hazard. The potential loss to be suffered and the compensation to the dependents of such employee require an adequate provision, which is met by purchasing an adequate life policies.

(h) To Enhance the Limit:

The business can obtain loan but pledging the policy as collateral for the loan. The insured persons are getting more loan due to certainty of payment at their death.

(i) Welfare of Employees:

The welfare of the employees is the responsibility of the employer. The employer is supposed to look after the welfare of the employees. The provisions are being made for death, disability and old age. Though these can be insured through individual life Insurance but an individual may not be insurable due to illness and age. But the group policy will cover his Insurance and the premium is very low in group Insurance. The expenditure paid on account of premium will be allowable expenditure.

3.3.2 STRUCTURE OF THE INSURANCE INDUSTRY STRUCTURE OF THE INSURANCE INDUSTRY

The Indian insurance industry consists of 57 insurance companies of which 24 are in life insurance business and 33 are non-life insurers. Among the life insurers, Life Insurance Corporation of India (LIC) is the sole public sector company.

Apart from that, among the Non-life insurers the following are the six public sector insurers.

1. The New India Assurance Company Limited
2. The Oriental Insurance Company Limited
3. The National Insurance Company Limited
4. The United India Insurance Company Limited
5. The Export Credit Guarantee Corporation of India Limited
6. The Agriculture Insurance Company of India Limited

Specialized Insurers

1. Export Credit Guarantee Corporation of India Limited (ECGC)

ECGC Limited wholly owned by Government of India, was set up in 1957 with the objective of promoting exports from the country by providing credit risk insurance and related services for exports.

2. Agriculture Insurance Company of India Limited (AIC)

AIC was incorporated on 20 December 2002. AIC aims to provide insurance coverage and financial support to the farmers in the failure of any of the notified crop as a result of natural calamities, pests and diseases to restore their creditworthiness for the ensuing season; to encourage the farmers to adopt progressive farming practices, high value in-puts and higher technology; to help stabilize farm incomes, particularly in disaster years. The plan provides comprehensive risk insurance for yield losses due to natural fire and lightning, storms, hailstorms, cyclone, typhoon, tempest, hurricane, tornado flood, inundation, landslide, drought, dry spells, pests/diseases, etc.

Out of 33 Non-life insurance companies, the following six private sector insurers are registered to underwrite policies exclusively in health, personal accident and travel insurance segments.

1. Star Health and Allied Insurance Company Ltd
2. Apollo Munich Health Insurance Company Ltd
3. Max Bupa Health Insurance Company Ltd
4. Religare Health Insurance Company Ltd
5. Cigna TTK Health Insurance Company Ltd
6. Aditya Birla Health Insurance Company Ltd

In addition to these, there is sole national re-insurer, namely, General Insurance Corporation of India (GIC Re).The Government had through the Insurance Laws (amendment) Act 2015 allowed foreign re-insurers to open their branches in India. The IRDAI has so far given licences to the following eight re-insurers to set up branches in India.

1. Munich Re (Germany)
2. Swiss Re (Switzerland)
3. SCOR (France)
4. Hannover Rueck (Germany)
5. RGA Life Reinsurance Company of Canada (United States)
6. Lloyd‘s India Reinsurance Branch (London)
7. XL Insurance Company‘s India Reinsurance branch (Hamilton, Bermuda)
8. ITI Reinsurance Ltd (India)

Other stakeholders in Indian Insurance market include agents (individual and corporate), brokers, surveyors and third party administrators servicing health insurance claims.

3.3.3 THE ROLE OF INSURANCE INTERMEDIARIES

The importance of insurance in modern economies is unquestioned and has been recognized for centuries. Insurance —is practically a necessity to business activity and enterprise.‖ But insurance also serves a broad public interest far beyond its role in business affairs and its protection of a large part of the country‘s wealth. It is the essential means by which the —disaster to an individual is shared by many, the disaster to a community shared by other communities; great catastrophes are thereby lessened, and, it may be, repaired.‖

Insurance is an essential element in the operation of sophisticated national economies throughout the world today.Without insurance coverage, the private commercial sector would be unable to function.

Insurance enables businesses to operate in a cost-effective manner by providing risk transfer mechanisms whereby risks associated with business activities are assumed by third parties. It allows businesses to take on credit that otherwise would be unavailable from banks and other credit-providers fearful of losing their capital without such protection, and it provides protection against the business risks of expanding into unfamiliar territory — new locations, products or services — which is critical for encouraging risk taking and creating and ensuring economic growth.

Beyond the commercial world, insurance is vital to individuals. Lack of insurance coverage would leave individuals and families without protection from the uncertainties of everyday life. Life, health, property and other insurance coverages are essential to the financial stability, well-being and peace of mind of the average person.

Insurance is a financial product that legally binds the insurance company to pay losses of the policyholder when a specific event occurs. The insurer accepts the risk that the event will occur in exchange for a fee, the premium. The insurer, in turn, may pass on some of that risk to other insurers or reinsurers. Insurance makes possible ventures that would otherwise be prohibitively expensive if one party had to absorb all the risk.

Advancements in medicine, product development, space exploration and technology all have become a reality because of insurance.

Consumers buy automobile insurance to cover both their cars and people who may be injured in accidents. Homeowners and renters buy insurance policies to protect their property and protect themselves from liability. People buy life and health insurance to protect themselves and their families from financial disaster in case of illness or death.

In some instances, governments require businesses to purchase insurance. Known as financial responsibility requirements, government-mandated purchases of insurance is intended to ensure that injured parties will be compensated. Businesses

also require other businesses to buy insurance. For instance, a retailer may require its suppliers to carry product liability insurance. Similarly, hospitals may require doctors to carry medical malpractice insurance, and mortgage firms often require their clients to insurance the properties used as collateral.

Distribution of insurance is handled in a number of ways. The most common is through the use of insurance intermediaries.

The Major Role of Insurance Intermediaries

The insurance industry, its products, costs, and providers are all well-known for the role of insurance intermediaries. Additionally, they are acutely aware of the requirements of insurance buyers and play a unique, multifaceted role in the insurance markets in particular, as well as the operation of domestic and global economies generally.

The function of the middleman is advantageous to the global and overall economies. Insurance‘s contribution to the economy‘s general health is widely known. Without any protection from risk, which insurance offers, commercial activity would dwindle and come to a standstill. Economic growth and the financial advantages such transformation gives people, firms, and industries would be slowed or eliminated. The following are some of the primary jobs and roles of insurance intermediaries:

- **Market Access:**

Different insurance companies and products are available to insurance brokers. By offering various options, they assist clients in navigating the complicated insurance market and help them select the products that best meet their needs.

- **Risk evaluation:**

The role of Insurance intermediaries is to evaluate the client‘s risk profile. They collect information about clients‘ assets, liabilities, and unique insurance needs to recommend coverage levels and policy types.

- **Policy Selection:**

The correct insurance plans are chosen by clients with the assistance of intermediaries. To help clients make educated selections, they offer professional advice on the terms and conditions of techniques, including coverage limitations, deductibles, and exclusions.

- **Customisation:**

Insurance brokers can work with insurers to have policies tailored to the specific requirements of their clients. This may entail customising the coverage, changing the price, or including particular endorsements.

- **Price bargaining:**

Intermediaries can frequently bargain on their client‘s behalf. They could look for discounts, cheaper rates, or more benevolent terms to get the finest insurance coverage at a reasonable cost.

- **Policy Administration:**

Intermediaries help with responsibilities related to policy administration, such as handling claims, policy renewals, and endorsements. They serve as a point of contact for the policyholder and the insurer, which helps to make the insurance process more efficient.

- **Assistance with Claims:**

When clients submit insurance claims, intermediaries walk them through the procedure. To guarantee a simple claims process, they can work with clients to gather the required paperwork and communicate with the insurance.

- **Risk Management:**

Insurance intermediaries frequently provide management services to assist clients in identifying and minimising potential risks. They might suggest safety precautions, loss control, and risk management techniques.

- **Education:**

Intermediaries inform clients on insurance basics, its vocabulary, and the value of having enough coverage. They assist clients in comprehending the advantages of insurance and the potential repercussions of having inadequate insurance.

- **Continuous evaluation:**

To ensure coverage is current and in line with their clients‘ changing demands or circumstances, intermediaries routinely evaluate the insurance portfolios of their clients. Clients are kept appropriately safeguarded thanks to this.

- **Compliance:**

Insurance intermediaries ensure insurance transactions abide by legal obligations and professional norms. When engaging with clients and insurers, they must follow ethical and legal rules.

- **Advocacy:**

Advocate for their clients when there are disagreements or problems with an insurance company. They could assist clients in settling disputes with insurers and pursuing a just conclusion.

Let’s Sum Up

An insurance organization is a company that provides various types of insurance policies to individuals and businesses.

Insurance organizations can be structured as mutual companies, where policyholders own the company, or as stock companies, where shareholders own the company.

The purpose of insurance is to provide financial protection and peace of mind by mitigating the impact of unforeseen events and risks.

The life insurance business is complimentary to the Government efforts in social management.

The Life Insurance provides security against premature death and payment in old age to lead the comfortable life.

The welfare of the employees is the responsibility of the employer. The employer is supposed to look after the welfare of the employees.

The importance of insurance in modern economies is unquestioned and has been recognized for centuries. Insurance —is practically a necessity to business activity and enterprise.‖

Insurance is a financial product that legally binds the insurance company to pay losses of the policyholder when a specific event occurs. The insurer accepts the risk that the event will occur in exchange for a fee, the premium.

CHECK YOUR PROGRESS – QUIZ - 12

1. Which of these persons will not be given a license to work as an insurance agent?
   a. A person with criminal record
   b. A corporate insurance executive.
   c. An employee of an insurance company
   d. All the three mentioned here.
2. The person responsible for evaluation and acceptance / rejection of risks and computation of premium in insurance is called
   a. Insured
   b. Assurer
   c. Agent
   d. Underwriter
3. What is a key responsibility of insurance agents regarding customer service?
   a. Minimizing claim payouts
   b. Providing accurate information and guidance to policyholders
   c. Ignoring customer complaints
   d. Promoting only high-profit policies
4. ____in the insurance are just like the retailers of any consumer product who help in selling and distributing the product.
   a. Underwriters
   b. Surveyors
   c. Agents
   d. Banker
5. The agents who are selling policies of several life and non life insurance companies at a time are known as
   a. Brokers
   b. Surveyors

c. Underwriters

d. Banks

Answers :

1. a. A person with criminal record
2. d. Underwriter
3. B. Providing accurate information and guidance to policyholders
4. c. Agents
5. a. Brokers

SECTION 3.4: INSURANCE BROKERS

3.4.1 Insurance brokers

An insurance broker is an intermediary who sells, solicits, or negotiates insurance on behalf of a client for compensation. An insurance broker is distinct from an insurance agent in that a broker typically acts on behalf of a client by negotiating with multiple insurers, while an agent represents one or more specific insurers under a contract.

Every insurance broker shall follow recognised standards of professional conduct and discharge their functions in the interest of the clients or policyholders. Conduct in matters relating to clients relationship— Every insurance broker shall:

- conduct its dealings with clients with utmost good faith and integrity at all times;
- act with care and diligence;
- ensure that the client understands their relationship with the insurance broker and on whose behalf the insurance broker is acting;
- treat all information supplied by the prospective clients as completely confidential to themselves and to the insurer(s) to which the business is being offered;
- take appropriate steps to maintain the security of confidential documents in their possession;
- hold specific authority of client to develop terms;
- understand the type of client it is dealing with and the extent of the client_s awareness of risk and insurance;
- obtain written mandate from client to represent the client to the insurer and communicate the grant of a cover to the client after effecting insurance. Unless it is specifically mentioned otherwise, the written mandate obtained from the client shall be valid for a period of one year if the mandate has no validity period mentioned. However, in the case of preunderwritten policies or retail/individual policies there is no requirement of obtaining mandate from the client;

- obtain written mandate from client to represent the client to the insurer/ reinsurer; and confirm cover to the insurer after effecting re-insurance, and submit relevant reinsurance acceptance and placement slips;
- avoid conflict of interest.
- Obtain necessary documents required under KYC norms and share with insurance company.
- Assist the client in opening e-insurance account.

Conduct in matters relating to Sales practices— Every insurance broker shall:

- confirm that it is a member of the Insurance Brokers Association of India or such a body of insurance brokers as approved by the Authority which has a memorandum of understanding with the Authority;
- confirm that he does not employ agents or canvassers to bring in business;
- identify itself and explain as soon as possible the degree of choice in the products that are on offer;
- ensure that the client understands the type of service it can offer;
- ensure that the policy proposed is suitable to the needs of the prospective client;
- give advice only on those matters in which it is knowledgeable and seek or recommend other specialist for advice when necessary;
- not make inaccurate or unfair criticisms of any insurer or any member of the Insurance Brokers Association of India or member of such body of insurance brokers as approved by the Authority;
- explain why a policy or policies are proposed and provide comparisons in terms of price, cover or service where there is a choice of products;
- state the period of cover for which the quotation remains valid if the proposed cover is not effected immediately;
- explain when and how the premium is payable and how such premium is to be collected, where another party is financing all or part of the premium, full details shall be given to the client including any obligations that the client may owe to that party;
- explain the procedures to be followed in the event of a loss.
- not indulge in any sort of money laundering activities.

- ensure that the insurance broker does not indulge in sourcing of business by themselves or through call centers by way of misleading calls or spurious calls.

Conduct in relation to furnishing of information — Every insurance broker shall:

- ensure that the consequences of non-disclosure and inaccuracies are pointed out to the prospective client;
- avoid influencing the prospective client and make it clear that all the answers or statements given are the latter's own responsibility.
- ensure that the information provided by the client on the basis of which the risk is accepted by the insurer is made part of the proposal form and shared with the client and the insurer. Any wrongful submission of information may be dealt as per the terms and conditions of the insurance contract.
- ask the client to carefully check details of information given in the documents and request the client to make true, fair and complete disclosure where it believes that the client has not done so and in case further disclosure is not forthcoming it should consider declining to act further;
- explain to the client the importance of disclosing all subsequent changes that might affect the insurance throughout the duration of the policy; and
- disclose on behalf of its client all material facts within its knowledge and give a fair presentation of the risk.

Conduct in relation to explanation of insurance contract — Every insurance broker shall:

- Provide the list of insurer(s) participating under the insurance contract and advise any subsequent changes thereafter;
- explain all the essential provisions of the cover afforded by the policy recommended by him so that, as far as possible, the prospective client understands what is being purchased;
- quote terms exactly as provided by insurer;

- draw attention to any warranty imposed under the policy, major or unusual restrictions, exclusions under the policy and explain how the contract may be cancelled;
- provide the client with prompt written confirmation that insurance has been effected. If the final policy wording is not included with this confirmation, the same shall be forwarded as soon as possible;
- notify changes to the terms and conditions of any insurance contract and give reasonable notice before any changes take effect;
- advise its clients of any insurance proposed on their behalf which will be effected with an insurer outside India, where permitted, and, if appropriate, of the possible risks involved; and
- not to favour any particular insurer while arranging insurance contracts to the clients.

Conduct in relation to renewal of policies — Every insurance broker shall:

- ensure that its client is aware of the expiry date of the insurance even if it chooses not to offer further cover to the client;
- ensure that renewal notices contain a warning about the duty of disclosure including the necessity to advise changes affecting the policy, which have occurred since the policy inception or the last renewal date;
- ensure that renewal notices contain a requirement for keeping a record (including copies of letters) of all information supplied to the insurer for the purpose of renewal of the contract;
- ensure that the client receives the insurer's renewal notice well in time before the expiry date.

Conduct in relation to claim by client— Every insurance broker shall

- explain to its clients their obligation to notify claims promptly and to disclose all material facts and advise subsequent developments as soon as possible;

- request the client to make true, fair and complete disclosure where it believes that the client has not done so. If further disclosure is not forthcoming it shall consider declining to act further for the client;
- give prompt advice to the client of any requirements concerning the claim;
- forward any information received from the client regarding a claim or an incident that may give rise to a claim without delay, and in any event within three working days;
- advise the client without delay of the insurer's decision or otherwise of a claim; and give all reasonable assistance to the client in pursuing his claim.

Conduct in relation to receipt of complaints — Every insurance broker shall:

- ensure that letters of instruction, policies and renewal documents contain details of complaints handling procedures;
- accept complaints either by phone or in writing, including through electronic mode;
- acknowledge a complaint within fourteen days from the receipt of correspondence, advise the member of staff who will be dealing with the complaint and the timetable for dealing with it;
- ensure that response letters are sent and inform the complainant of what he may do if he is unhappy with the response;
- ensure that complaints are dealt with at a suitably senior level;
- have in place a system for recording and monitoring complaints.

Conduct in relation to documentation — Every insurance broker shall

- ensure that any documents issued comply with all statutory or regulatory requirements from time to time in force;
- send policy documentation without avoidable delay,
- make available, with policy documentation, advice that the documentation shall be read carefully and retained by the client;
- not withhold documentation from its clients without their consent, unless adequate and justifiable reasons are disclosed in writing and without delay to

the client. Where documentation is withheld, the client must still receive full details of the insurance contract;

- acknowledge receipt of all monies received in connection with an insurance policy;
- ensure that the reply is sent promptly or use its best endeavours to obtain a prompt reply to all correspondence;
- ensure that all written terms and conditions are fair in substance and set out, clearly and in plain language, client's rights and responsibilities;
- subject to the payment of any monies owed to it, make available to any new insurance broker instructed by the client all documentation to which the client is entitled and which is necessary for the new insurance broker to act on behalf of the client; and
- Assist the client in obtaining / receiving electronic insurance policies.

Conduct in matters relating to advertising

Every insurance broker shall conform to the relevant provisions of the Insurance Regulatory and Development Authority (Insurance Advertisements and Disclosure) Regulations, 2000, and: ——

- ensure that statements made are not misleading or extravagant;
- where appropriate, distinguish between contractual benefits which the insurance policy is bound to provide and non-contractual benefits which may be provided;
- ensure that advertisements shall not be restricted to the policies of one insurer, except where the reasons for such restriction are fully explained with the prior approval of that insurer;
- ensure that advertisements contain nothing which is in breach of the law nor omit anything which the law requires;
- ensure that advertisement does not encourage or condone defiance or breach of the law;
- ensure that advertisements contain nothing which is likely, in the light of generally prevailing standards of decency and propriety, to cause grave or widespread offence or to cause disharmony;
- ensure that advertisements are not so framed as to abuse the trust of clients or exploit their lack of experience or knowledge; and

- ensure that all descriptions, claims and comparisons, which relate to matters of objectively ascertainable fact shall be capable of substantiation.

Conduct in matters relating receipt of remuneration — Every insurance broker shall:

- if requested by a client, disclose the amount of remuneration and reward and the basis of such remuneration and reward it receives as a result of effecting insurance for that client and whether there is any relation between him and the insurer.

Conduct in relation to matters relating to training — Every insurance broker shall:

- ensure that its staff, particularly broker qualified persons, are aware of and adhere to the standards expected of them by this code;
- ensure that staff, particularly broker qualified persons, are competent, suitable and have been given adequate training;
- ensure that there is a system in place to monitor the quality of advice given by broker qualified persons engaged by it;
- ensure that members of staff, particularly broker qualified persons, are aware of legal requirements affecting their activities; and only handle classes of business in which they are competent;
- draw the attention of the client to Section 41 of the Act, which prohibits rebating and sharing of commission or remuneration or reward.

Information and Education common to direct & reinsurance brokers

- The insurance broker will support industry education initiatives aimed at explaining insurance to consumers and the community.
- The insurance broker will make readily available to client:
  (i) Up-to-date information on insurance;
  (ii) Information to assist insured to determine the level of insurance cover they may require; and
  (iii) Information about insurance products and services, and this Code.

Every insurance broker shall display in every office where it is carrying on business and to which the public have access a notice to the effect that a copy of the code of conduct is available upon request and that if a member of the public wishes to make a complaint or requires the assistance of the Authority in resolving a dispute, he may write to the Authority.

An insurance broker as defined in these regulations shall not act as an insurance agent of any insurer under section 42 of the Act.

Every insurance broker shall abide by the provisions of the Insurance Act, 1938 (4 of 1938), Insurance Regulatory and Development Authority Act 1999(41 of 1999), rules and regulations made there under which may be applicable and relevant to the activities carried on by them as insurance brokers.

3.4.2 Insurance Agents

An agent can render great service to the customer. The role begins at the stage of sale and continues through the duration of the contract, and includes the following steps. Let us look at some of the milestones in a contract and the role played at each step.

1. The Point of Sale- Best advice

The first point for service is the point of sale. One of the critical issues involved in purchase of non-life Insurance is to determine the amount of coverage [Sum Insured] to be bought. Here it is important to keep a basic percept in mind - Do not recommend insuring where the risk can be managed otherwise. The insured needs to make sure that the expected loss involved is greater than the cost of insurance. If the premium payments are high compared to the loss involved, it may be advisable to just bear the risk. On the other hand, if the occurrence of any contingency would lead to financial burden, it is wise to insure against such contingency. Whether insurance is needed or not, depends on the circumstances. If the probability of loss or damage to an asset due to a peril is negligible, one may retain the risk rather than insure it. Similarly if an item has insignificant value, one may not insure it.

In India, motor insurance against third party is compulsory under the law. In that case, the debate about whether one needs insurance or not is irrelevant. One

must purchase third party insurance if he owns a vehicle because it is mandatory if one wants to drive on a public road. At the same time it would be prudent to cover the possibility of loss of own damage to the car which is not mandatory. In case a portion of the possible loss can be borne by oneself, it would be economical for the insured to opt for a deductible. A corporate customer may have varied needs, right from the coverage of factory, people, cars, liability exposures etc. She needs the right advice for the coverage and policies to be taken. Most non-life insurance policies broadly fall in two categories:

i. Named peril policies
ii. All risk policies

The latter are costlier as they cover all losses which are specifically not excluded under the policy. Hence opting for „named peril" policies where the most probable causes of loss are covered by the perils named in the policy may be more beneficial, as such a step could save premiums and provide need based cover to the insured. The agent really begins to earn her commission when she renders best advice on the matter. It would be worthwhile for the agent to remember that while one may view insurance as the standard approach for dealing with the risk, there are other techniques like risk retention or loss prevention that are available as options for reducing the cost of insurance.

From the standpoint of an insured the relevant questions for instance may be:

a. How much premium will be saved by considering deductibles?
b. How much would a loss prevention activity result in reduction in premiums?

When approaching the customer as a non-life insurance sales person the question an agent needs to ask herself is about her role vis-à-vis the customer. Is she going there just to get a sale or to relate to the customer as a coach and partner who would help him to manage his risks more effectively?

The customer‘s angle is different. He is not so much concerned with getting maximum insurance per rupee spent, but rather in reducing the cost of handling risk. The concern would be thus on identifying those risks which customer cannot retain and hence must be insured.

In other words the role of an insurance agent is more than that of a mere sales person. She also needs to be a risk assessor, underwriter, risk management

counsellor, designer of customised solutions and a relationship builder who thrives on building trust and long-term relationships, all rolled into one.

2. The proposal stage

The agent has to support the customer in filling out the proposal for insurance. The insured is required to take responsibility for the statements made therein. The salient aspects of a proposal form have been discussed.

It is very important that the agent should explain and clarify to proposer the details to be filled as answer to each of questions in the proposal form. In the event of a claim, a failure to give proper and complete information can jeopardise the customer‘s claim.

Sometimes there may be additional information that may be required to complete the policy. In such cases the company may inform the customer directly or through the agent / advisor. In either case, it becomes necessary to help the customer complete all the required formalities and even explain to him or her why these are necessary.

In View of Insurance Regulatory and Development Authority of India (I.R.D.A.I.) (Issuance of e-Insurance Policies) Regulations, 2016, which have come into Force, from 1 st October, 2016:

—Every Insurer, soliciting Insurance-Business through Electronic-Mode, shall create an e-Proposal-Form, Similar to the Physical Proposal-Form, Approved by the Authority; and such Form should enable Capture-of-Information in Electronic-Form, that would enable Easy Processing and Servicing.‖

—e-Proposal-Form shall have a Provision to Capture the electronic-Insurance Account (e-I-A) Number of the Prospect, and the Insurer shall facilitate its Creation, whenever the electronic-Insurance-Policy is proposed to be issued through the Insurance Repository System.‖

—The Prospect should have Own electronic-Signature, while furnishing the Details in e-Proposal-Form.‖ Here, the Agent can help the Customer to open an e-Insurance Account (e-I-A), if required, through the Registered Insurance Repository.

3. Acceptance stage

a) Cover note

It is the agent‘s responsibility to ensure that the cover note is issued by the company, where applicable, to the insured. Promptness in this regard communicates to the client that his interests are safe in the hands of the agent and the company.

b) Delivery of the policy document

Delivery of the policy is another major opportunity that an agent gets to make contact with the customer. If company rules permit a policy document being delivered in person, it may be a good idea to collect it and present the document to the customer. If the policy is being sent directly by mail, one must contact the customer, once it is known that the policy document has been sent. This is an opportunity to visit the customer and explain anything that is unclear in the document received. This is also an occasion to clarify various kinds of policy provisions, and the policy holder"s rights and privileges that the customer can avail of. This act demonstrates a willingness to provide a level of service beyond the sale.

This meeting is also an occasion to pledge the agent‘s commitment to serving the customer and communicating full support.

In View of Insurance Regulatory and Development Authority of India (I.R.D.A.I.) (Issuance of e-Insurance Policies) Regulations, 2016, which have come into Force, from 1 st October, 2016:

—Every Insurer shall issue Electronic Insurance-Policies, in Case of: All Motor Retail Insurance and Individual Travel (Over-Seas) Insurance, and the Policies that fulfil the Criteria, in Terms of Sum-Assured {Rupees 10 Lakhs in Case of Pure Term-Assurance [excluding, Term-Assurance with Return-of-Premium(s)] and All Retail General Insurance except Motor Insurance, and Individual Personal Accident (P.A.) Insurance and Domestic Travel Insurance, and Rupees 1 Lakh in Case of Other Than Pure Term-Assurance [including, Term-Assurance with Return-of-Premium(s)], and Rupees 5 Lakhs in Case of Individual HealthInsurance} or Premium {Single or Annual, Equal To or Exceeding Rupees 10,000/- [Rupees 5,000/- in Case of All

Retail General Insurance Policies except Motor Insurance]}, or, Pension-Per-Annum (Rupees 10,000/- in Case of Immediate Annuities).‖

Here, the Agent can help the Customer to open an e-Insurance Account (e-I-A), through the Registered Insurance Repository.

The next logical step would be to ask for the names and particulars of other individuals he knows who can possibly benefit from the agent‘s services. If the client can himself contact these people and introduce the agent to them, it would mean a great breakthrough in business.

c) Policy renewal

Non-life insurance policies have to be renewed each year and the customer has a choice at the time of each renewal, to continue insuring with the same company or switch to another company. This is a critical point where the goodwill and trust created by the agent and the company gets tested.

Although there is no legal obligation on the part of insurers to advise the insured that his policy is due to expire on a particular date, yet as a matter of courtesy and decidedly a healthy business practice, insurers issue a —Renewal Notice - one month in advance of the date of expiry, inviting renewal of the policy. The agent needs to be in touch with the customer well before the renewal due date to remind the latter about renewal so that he can make provision for the same.

The relationship gets strengthened by keeping in touch with the client from time to time, by greeting him on some occasion like a festival or a family event. Similarly when there is a moment of difficulty or sorrow by to offering assistance.

4. The claim stage

The agent has a crucial role to play at the time of claim settlement. It is her task to ensure that the incident giving rise to the claim is immediately informed to the insurer and that the customer carefully follows all the formalities and assists in all the investigations that may need to be done to assess the loss.

3.4.3 Surveyors and Loss Assessors

a) Surveyors

Surveyors are professionals licensed by IRDAI. They are experts in inspecting and evaluating losses in specific areas. Surveyors are generally paid fees by the insurance company, engaging them. Surveyors and loss assessors are hired by general insurance companies normally, at the time of a claim. They inspect the property in question, examine and verify the causes and circumstances of the loss. They also estimate the quantum of the loss and submit reports to the insurance company.

They also advise insurers, regarding appropriate measures to prevent further losses. Surveyors are governed by provisions of the Insurance Act, 1938, Insurance Rules 1939 and specific regulations issued by IRDAI. Claims made outside the country in case of „Travel Policy" or „Marine Open Cover" for exports, are assessed by the claims settling agents abroad named in the policy.

These agents may assess the loss and make payment, which is reimbursed by the insurers along with their settling fees. Alternatively, all the claims papers are collected by the insurance claim settling agents and submitted to the insurers, along with their assessment.

Section 64 UM of Insurance Act

Where, in the case of a claim of less than Fifty thousand rupees for motor own damage and one hundred thousand rupees for other property damage in value on any policy of insurance it is not practicable for an insurer to employ an approved surveyor or loss assessor without incurring expenses disproportionate to the amount of the claim, the insurer may employ any other person (not being a person disqualified for the time being for being employed as a surveyor or loss assessor) for surveying such loss and may pay such reasonable fee or remuneration to the person so employed as he may think fit.

3.4.4 Third Party Administrators

Definition

"Third Party Administrators or TPA means any person who is licensed under the IRDAI (Third Party Administrators - Health Services) Regulations, 2001 by the Authority, and is engaged, for a fee or remuneration by an insurance company, for the purposes of providing health services.

Third Party Administrators are a new type of service providers who came into business since 2001. They are not authorized to sell insurance but provide administrative services to insurance companies. Once a health insurance policy is sold, the details of the insured persons are shared with a appointed TPA who then prepares the data base and issues health cards to the insured persons. Such health cards enable the insured person to avail cashless medical facilities (treatment without having to pay cash immediately) at hospitals and clinics. Even if the insured person does not use cashless facility, he can pay the bills and seek reimbursement from the appointed TPA. TPAs are funded by the insurance companies for their respective claims and are remunerated by them by way of fees which are a percentage of the premium.

Role of third party administrators (TPA)

1. Introduction of TPAs in India

The insurance sector was opened to private players in the year 2000. Meanwhile, the demand for healthcare products was also growing with new products being launched. A need was therefore felt for the introduction of a channel for post-sale services in health insurance. This offered the opportunity for professional Third Party Administrators to be introduced. Seeing this, the Insurance Regulatory and Development Authority allowed TPAs to be introduced into the market under license from IRDAI, provided they complied with The IRDAI (Third Party Administrators — Health Insurance) Regulations, 2001 notified on 17th Sept 2001.

"Health Services by TPA" means the services rendered by a TPA to an insurer under an agreement in connection with health insurance business but does not include the business of an insurance company or the soliciting either directly or indirectly, of health insurance business or deciding on the admissibility of a claim or

its rejection. Thus the scope of TPA services starts after the sale and issue of the insurance policy. In case of insurers not using TPAs, the services are performed by inhouse team.

2. Post sale service of health insurance

a) Once the proposal (and the premium) is accepted, the coverage commences.
b) If a TPA is to be used for servicing the policy, the insurer passes on the information about the customer and the policy to the TPA.
c) The TPA enrolls the members (while the proposer is the person taking the policy, members are those covered under the policy) and may issue a membership identification in the form of a card, either physical or electronic.
d) The membership with the TPA is used for availing cashless facility as well as processing of claims when the member requires the support of the policy for a hospitalization or treatment that is covered.
e) TPA processes the claim or cashless request and provides the services within the time agreed with the insurer.

The cut-off point from which the role of a TPA begins is the moment of allocation of the policy in the name of the TPA as the servicing entity. The servicing requirement continues through the policy period and through any further period that is allowed under the policy for reporting a claim. When thousands of policies are serviced, this activity is continuous, especially when the same policy is renewed and the same TPA is servicing the policy.

Objectives of third party administration (TPA)

The concept of Third Party Administration in health insurance can be said to have been created with the following objectives:

a. To facilitate service to a customer of health insurance in all possible manners at the time of need.
b. To organise cashless treatment for the insured patient at network hospitals.
c. To provide fair and fast settlement of claims to the customers based on the claim documents submitted and as per procedure and guidelines of the insurance company.

d. To create functional expertise in handling health insurance claims and related services.
e. To respond to customers in a timely and proper manner.
f. To create an environment where the market objective of an insured person being able to access quality healthcare at a reasonable cost is achieved and
g. To help generate/collate relevant data pertaining to morbidity, costs, procedures, length of stay etc.

3.4.5 Code of Conduct

Every agent shall adhere to the code of conduct specified below:-

Every insurance agent shall, ---

- Identify himself and the insurer of whom he is an insurance agent;
- Show the agency identity card to the prospect, and also disclose the agency appointment letter to the prospect on demand;
- Disseminate the requisite information in respect of insurance products offered for sale by his insurer and take into account the needs of the prospect while recommending a specific insurance plan;
- Where the Insurance agent represents more than one insurer offering same line of products, he should dispassionately advice the policyholder on the products of all Insurers whom he is representing and the product best suited to the specific needs of the prospect;
- Disclose the scales of commission in respect of the insurance product offered for sale, if asked by the prospect;
- Indicate the premium to be charged by the insurer for the insurance product offered for sale;
- Explain to the prospect the nature of information required in the proposal form by the insurer, and also the importance of disclosure of material information in the purchase of an insurance contract;
- Bring to the notice of the insurer every fact about the prospect relevant to insurance underwriting, including any adverse habits or income inconsistency of the prospect, within the knowledge of the agent, in the form of a report called —Insurance Agent‘s Confidential Report‖ along with every proposal submitted to the insurer wherever applicable, and any material fact that may adversely affect the underwriting decision of the insurer as regards

acceptance of the proposal, by making all reasonable enquiries about the prospect;

- Obtain the requisite documents at the time of filing the proposal form with the insurer; and other documents subsequently asked for by the insurer for completion of the proposal;
- Advise every prospect to effect nomination under the policy.
- Inform promptly the prospect about the acceptance or rejection of the proposal by the insurer;
- Render necessary assistance and advice to every policyholder introduced through him/her on all policy servicing matters including assignment of policy, change of address or exercise of options under the policy or any other policy service, wherever necessary;
- Render necessary assistance to the policyholders or claimants or beneficiaries in complying with the requirements for settlement of claims by the insurer.

Let's Sum Up

An insurance broker is an intermediary who sells, solicits, or negotiates insurance on behalf of a client for compensation. An insurance broker is distinct from an insurance agent in that a broker typically acts on behalf of a client by negotiating with multiple insurers, while an agent represents one or more specific insurers under a contract.

An agent can render great service to the customer. The role begins at the stage of sale and continues through the duration of the contract.

The first point for service is the point of sale. One of the critical issues involved in purchase of non-life Insurance is to determine the amount of coverage [Sum Insured] to be bought.

In India, motor insurance against third party is compulsory under the law. In that case, the debate about whether one needs insurance or not is irrelevant. One must purchase third party insurance if he owns a vehicle because it is mandatory if one wants to drive on a public road.

Non-life insurance policies have to be renewed each year and the customer has a choice at the time of each renewal, to continue insuring with the same company or switch to another company. This is a critical point where the goodwill and trust created by the agent and the company gets tested.

Surveyors are professionals licensed by IRDAI. They are experts in inspecting and evaluating losses in specific areas. Surveyors are generally paid fees by the insurance company, engaging them. Surveyors and loss assessors are hired by general insurance companies normally, at the time of a claim.

"Third Party Administrators or TPA means any person who is licensed under the IRDAI (Third Party Administrators - Health Services) Regulations, 2001 by the Authority, and is engaged, for a fee or remuneration by an insurance company, for the purposes of providing health services.

CHECK YOUR PROGRESS – QUIZ - 13

1. An insurance broker primarily:
   a. Represents the interests of the insurance company
   b. Acts on behalf of the insured to find the best insurance policy
   c. Assesses the damage for claims
   d. Provides health services
2. What is the main role of a surveyor and loss assessor?
   a. Selling insurance policies
   b. Assessing the extent of loss or damage and determining the claim amount
   c. Collecting premiums
   d. Managing investment funds
3. Third Party Administrators (TPAs) in health services are responsible for:
   a. Underwriting insurance policies
   b. Providing administrative services for processing health insurance claims
   c. Surveying and assessing losses
   d. Selling health insurance policies

4. Which of the following is a key aspect of the code of conduct for insurance agents?

a. Prioritizing personal profit over client interest
b. Misrepresenting policy terms to clients
c. Acting with integrity and honesty
d. Avoiding continuous professional development.

5. **The principle of indemnity is not applicable to**

a. Fire Insurance
b. Marine Insurance
c. Life Insurance
d. Property Insurance

Answers :

1. b. Acts on behalf of the insured to find the best insurance policy
2. b. Assessing the extent of loss or damage and determining the claim amount
3. b. Providing administrative services for processing health insurance claims
4. c. Acting with integrity and honesty
5. c. Life Insurance

UNIT SUMMARY

The Indian insurance market is one of the largest and fastest-growing in the world, with immense potential for expansion. It is primarily divided into two segments: life insurance and non-life (general) insurance. Life insurance, which includes savings, pension, and protection plans, is a dominant part of the market, led by both public sector giant Life Insurance Corporation of India (LIC) and several private insurers. General insurance covers a wide range of products, including health, motor, property, crop, and liability insurance, with health and motor insurance being the largest segments.

The market is regulated by the Insurance Regulatory and Development Authority of India (IRDAI), which sets guidelines to ensure consumer protection, financial stability, and industry growth. Over the past decade, the Indian insurance industry has witnessed significant changes, including the rise of private players, increased foreign direct investment (FDI) limits, and greater regulatory focus on customer-centric practices.

Despite the sector's robust growth, insurance penetration in India remains relatively low compared to global standards. This indicates a large underinsured population, particularly in rural areas and lower-income groups. The government has launched various initiatives, such as Pradhan Mantri Jeevan Jyoti Bima Yojana and Ayushman Bharat, to increase insurance coverage and provide affordable insurance solutions to underserved segments.

The digital revolution is also transforming the Indian insurance landscape. Insurtech, data analytics, and artificial intelligence are being increasingly utilized to improve operational efficiency, streamline claims processes, and provide personalized insurance products. Mobile platforms and online sales are expanding reach, particularly among tech-savvy younger consumers.

The future of the Indian insurance market is promising, with a growing middle class, increasing awareness of the importance of financial protection, and favorable regulatory changes expected to drive further expansion. However, addressing underinsurance and enhancing customer trust will remain key challenges for the industry moving forward.

SELF ASSESSMENT QUESTIONS

1. Examine the evolution of the Indian insurance market post-liberalization. What role have private players and foreign investments played in transforming the industry?
2. What are the key challenges and opportunities in increasing insurance penetration in rural India?
3. Analyze the role of the Insurance Regulatory and Development Authority of India (IRDAI) in shaping a balanced insurance market. How has regulatory intervention influenced consumer protection and market stability?
4. How has technology transformed the Indian insurance market? Discuss the role of digital platforms, data analytics, and insurtech in improving customer experience and operational efficiency.
5. What is the significance of government-backed insurance schemes such as Pradhan Mantri Fasal Bima Yojana and Ayushman Bharat in enhancing insurancecoverage in India?

6. Discuss the future of health insurance in India in light of rising healthcare costs and changing demographics. How can insurers meet the growing demand for comprehensive health coverage?
7. Critically evaluate the factors contributing to the low insurance penetration in India despite the country's growing economy.
8. What role does customer education and financial literacy play in shaping the growth of the insurance market in India?
9. How can life insurers in India balance between offering savings-oriented and protection-oriented products? Discuss the shifting consumer preferences in the life insurance segment.
10. What are the environmental, social, and governance (ESG) trends in the Indian insurance market? How can insurance companies incorporate sustainability in their operations and product offerings?

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UNIT IV: CUSTOMER SERVICES IN INSURANCE

Customer Service in Insurance — Quality of Service-Role of Insurance Agents in Customer Service-Agent's Communication and Customer Service – Ethical Behaviour in Insurance — Grievance Redressal System in Insurance Sector – Integrated Grievance Management System-Insurance Ombudsman - Insurance Regulatory and Development Authority of India Act (IRDA) — Regulations and Guidelines.

CUSTOMER SERVICES IN INSURANCE

UNIT OBJECTIVES

Customer service plays a crucial role in the insurance industry, serving as a bridge between insurers and policyholders. In an industry where trust and reliability are paramount, excellent customer service can significantly influence customer satisfaction, retention, and brand loyalty. It encompasses a wide range of activities, from assisting customers in understanding policy options, guiding them through the buying process, answering queries, to supporting them in filing claims or resolving issues efficiently.

In insurance, the nature of customer interactions is often complex and emotionally charged, especially during claim settlements or when dealing with financial losses. Therefore, insurers need to provide prompt, transparent, and empathetic support to address customer concerns. With rising competition and the growth of digital platforms, customer expectations for quick, personalized, and seamless service have increased. Insurers are now leveraging technology like AI, chatbots, and data analytics to provide real-time assistance, automate routine tasks, and enhance the overall service experience.

Ultimately, superior customer service is vital in building trust, fostering long-term relationships, and differentiating an insurer in a highly competitive market. By focusing on customer-centric practices, insurers can improve satisfaction, drive loyalty, and enhance their reputation, contributing to business growth and sustainability.

SECTION 4.1: CUSTOMER SERVICE IN INSURANCE

4.1.1 Customer Service in Insurance

Customers provide the bread and butter of a business and no enterprise can afford to treat them indifferently. The role of customer service and relationships is far more critical in the case of insurance than in other products.

The following are the customers services in Insurance

1. Consider Customer Complains as Opportunities

Considering customer complaints as opportunities can greatly benefit insurance companies in improving their customer service. Rather than viewing customers‘ complaints as negative feedback, insurance companies can adopt a proactive mindset and recognize them as valuable opportunities to help them grow and improve.

Each complaint offers a unique opportunity to identify and address areas of dissatisfaction, refine processes, and enhance the overall customer experience. Insurance companies can enhance customer satisfaction, strengthen relationships, and build trust by actively listening to customers‘ concerns and taking the right action to resolve them as soon as possible.

Moreover, by analyzing the patterns and trends in complaints, companies can identify systemic issues and make necessary changes in their strategies to prevent similar problems from occurring in the future. This customer-centric approach ensures continuous improvement and helps insurance companies evolve to meet their valued customers‘ needs.

2. Simplify Policies and Enhance Transparency

Simplifying policies and enhancing transparency is vital in improving insurance companies‘ customer service. The complexity of insurance policies can often lead to confusion and frustration for customers. By simplifying policies and presenting them clearly and concisely, insurance companies can make it easier for customers to understand their coverage and benefits.

This simplification enhances the customer experience in insurance and helps customers make informed decisions. Enhancing transparency by providing clea information about terms, conditions, and claims processes builds trust and credibility. When customers have a transparent view of how their insurance works, they feel more confident and satisfied with their coverage.

3. Follow Up with Your Customers

Following up with customers can significantly impact customer experience in insurance companies. By reaching out to customers after interactions or during critical stages of their insurance journey, companies showcase a genuine commitment to their customers. It shows that the company values the customers and provides an opportunity to address their concerns.

Additionally, following up allows insurance companies to gather valuable feedback, enabling them to continuously improve their processes, products, and services. This way, insurance companies can strengthen customer relationships, increase customer loyalty, and differentiate themselves in a competitive market.

4. Empower Customers with Self-Service Option

Empowering customers with self-service options is a transformative approach that can significantly enhance their experience and improve customer service in insurance companies. With the help of self-service platforms, such as a knowledge base, video tutorials, FAQs, community forums, etc., policyholders can better understand the policies.

Self-service reduces reliance on traditional customer service channels and empowers customers to resolve simple queries independently. It streamlines processes, reduces response times, offers quick and efficient solutions and increases customer satisfaction. Furthermore, self-service capabilities enable insurance companies to manage their resources more strategically by allowing the service agents to focus on more complex issues.

5. Streamline Claims Processes for Customers

The claims processes are critical for every customer, as they often occur during times of stress or need. By streamlining this process, insurance companies can reduce customer burden and enhance their overall experience.

Simplifying claim forms and providing clear instructions can significantly accelerate the process and eliminate unnecessary complexities. When customers experience a smooth and efficient claims process, it builds their confidence in the insurance company and reduces their stress during challenging times.

6. Use Real-time Analytics to Monitor Customer Interactions

Utilizing real-time analytics to monitor customer interactions can be a game-changer. By leveraging advanced analytics tools, insurance companies can gain valuable real-time insights into customer behavior, preferences, and satisfaction levels.

By monitoring customer interactions in real-time, companies can identify patterns and make data-backed decisions to optimize their customer service strategies. Analyzing customer interactions in real-time enables insurance companies to offer personalized recommendations, deliver timely support, and resolve issues more effectively.

7. Employ a Help Desk Software to Offer Better Support

Employing a help desk software solution is a valuable strategy that can significantly improve customer service. By implementing robust help desk software, insurance companies can streamline their support processes, centralize customer inquiries, and ensure timely and efficient resolution of issues. This software allows customer service agents to track and manage customer queries from when they are generated till their resolution.

It also facilitates seamless collaboration among support teams, ensuring customer inquiries are handled accurately. Help desk software provides a comprehensive view of customer interactions by offering companies insights into common pain points and areas for improvement. By leveraging this, insurance companies can easily deliver personalized support as per their customers‘ needs.

8. Personalize Everything for Your Customers

Personalizing everything for customers is a powerful approach that can greatly enhance their experience. By tailoring interactions, suggestions, and offerings to individual customers, insurance companies can create a sense of individuality and demonstrate a deep understanding of their policyholders‘ needs.

Personalization can be achieved by leveraging customer data and employing advanced analytics. Personalization also extends to communication channels, ensuring customers receive information through their preferred channels. Ultimately,

personalization enhances the customer service experience in the insurance industry, demonstrating that customers are valued and understood as individuals.

9. Implement Fraud Detection Systems

By adopting robust fraud detection technologies and systems, insurance companies can effectively identify and mitigate fraudulent activities, protecting themselves and their honest policyholders. Detecting and preventing fraud protects the company‘s financial stability and ensures accurate customer coverage.

By implementing these systems, insurance companies demonstrate their commitment to providing customers with a secure and trustworthy environment. Fraud detection systems can create a positive customer experience by reducing the potential impact of fraudulent claims on legitimate policyholders.

10. Enhance Data Security and Privacy

Enhancing data security and privacy is the key to improving customer service in insurance companies. Customers trust insurance companies with sensitive personal and financial information, and companies must protect that data from unauthorized access or breaches.

Insurance companies can ensure the protection of their sensitive information by implementing robust data security measures, including encryption, access controls, and regular security audits.

Enhanced data security mitigates the risk of identity theft or fraud and protects the insurance company‘s reputation. When customers have peace of mind knowing that their data is secure, they experience a higher level of trust and satisfaction with the company.

11. Integrate Omnichannel Approach

Insurance companies can provide a seamless and consistent customer journey across multiple channels by adopting an omnichannel approach. Customers can engage with the company through various channels such as phone, email, chatbots, social media, or in-person interactions, flexibly switching between channels effortlessly. This integration gives customers a unified experience, regardless of their chosen channel.

12. Collect Feedback to Improve Service

Collecting feedback to improve service is a vital practice that can greatly enhance customer service. By actively seeking customer feedback, insurance companies gain valuable insights into their satisfaction levels, pain points, and areas for improvement. This feedback can be collected through surveys, feedback forms, or even through direct interactions with customer service agents.

Additionally, collecting feedback demonstrates a commitment to continuous improvement and customer-centricity, building policyholders‘ trust and loyalty. By acting on customer feedback and making necessary adjustments, insurance companies can provide a more tailored and satisfying customer service experience in the insurance industry.

4.1.2 Quality of service

It is necessary for insurance companies and their personnel, which includes their agents, to render high quality service and delight the customer.

It highlights five major indicators of service quality:

a) **Reliability:** the ability to perform the promised service dependably and accurately. Most customers regard reliability as being the most important of the five dimensions of service quality. It is the foundation on which trust is built.

b) **Responsiveness:** refers to the willingness and ability of service personnel to help customers and provide prompt response to the customer‘s needs. It may be measured by indicators like speed, accuracy, and attitude while giving the service.

c) **Assurance:** refers to the knowledge, competence and courtesy of service providers and their ability to convey trust and confidence. It is given by the customer‘s evaluation of how well the service employee has understood needs and is capable of meeting them.

d) **Empathy:** is described as the human touch. It is reflected in the caring attitude and individualised attention provided to customers.

e) **Tangibles:** represent the physical environmental factors that the customer can see, hear and touch. For instance the location, the layout and cleanliness and the sense of order and professionalism that one gets when visiting an insurance company‘s office can make a great impression on the customer. The physical ambience becomes especially important because it creates first and lasting impressions, before and after the actual service is experienced.

4.1.3 Role of Insurance Agents in Customer Service

1. The Point of Sale - The first point for service is the point of sale. One of the critical issues involved in purchase of non-life Insurance is to determine the amount of coverage [Sum Insured] to be bought. Here it is important to keep a basic percept in mind - Do not recommend insuring where the risk can be managed otherwise. The insured needs to make sure that the expected loss involved is greater than the cost of insurance. If the premium payments are high compared to the loss involved, it may be advisable to just bear the risk. On the other hand, if the occurrence of any contingency would lead to financial burden, it is wise to insure against such contingency. Whether insurance is needed or not, depends on the circumstances. If the probability of loss or damage to an asset due to a peril is negligible, one may retain the risk rather than insure it. Similarly if an item has insignificant value, one may not insure it.

In India, motor insurance against third party is compulsory under the law. In that case, the debate about whether one needs insurance or not is irrelevant. One must purchase third party insurance if he owns a vehicle because it is mandatory if one wants to drive on a public road. At the same time it would be prudent to cover the possibility of loss of own damage to the car which is not mandatory. In case a portion of the possible loss can be borne by oneself, it would be economical for the insured to opt for a deductible. A corporate customer may have varied needs, right from the coverage of factory, people, cars, liability exposures etc. She needs the right advice for the coverage and policies to be taken. Most non-life insurance policies broadly fall in two categories:

iii. Named peril policies

iv. All risk policies

The latter are costlier as they cover all losses which are specifically not excluded under the policy. Hence opting for „named peril‟ policies where the most

probable causes of loss are covered by the perils named in the policy may be more beneficial, as such a step could save premiums and provide need based cover to the insured. The agent really begins to earn her commission when she renders best advice on the matter. It would be worthwhile for the agent to remember that while one may view insurance as the standard approach for dealing with the risk, there are other techniques like risk retention or loss prevention that are available as options for reducing the cost of insurance.

From the standpoint of an insured the relevant questions for instance may be:

c. How much premium will be saved by considering deductibles?
d. How much would a loss prevention activity result in reduction in premiums?

When approaching the customer as a non-life insurance sales person the question an agent needs to ask herself is about her role vis-à-vis the customer. Is she going there just to get a sale or to relate to the customer as a coach and partner who would help him to manage his risks more effectively?

The customer‘s angle is different. He is not so much concerned with getting maximum insurance per rupee spent, but rather in reducing the cost of handling risk. The concern would be thus on identifying those risks which customer cannot retain and hence must be insured.

In other words the role of an insurance agent is more than that of a mere sales person. She also needs to be a risk assessor, underwriter, risk management counsellor, designer of customised solutions and a relationship builder who thrives on building trust and long-term relationships, all rolled into one.

2. The proposal stage

The agent has to support the customer in filling out the proposal for insurance. The insured is required to take responsibility for the statements made therein. The salient aspects of a proposal form have been discussed.

It is very important that the agent should explain and clarify to proposer the details to be filled as answer to each of questions in the proposal form. In the event of a claim, a failure to give proper and complete information can jeopardise the customer‘s claim.

Sometimes there may be additional information that may be required to complete the policy. In such cases the company may inform the customer directly or

through the agent / advisor. In either case, it becomes necessary to help the customer complete all the required formalities and even explain to him or her why these are necessary.

In View of Insurance Regulatory and Development Authority of India (I.R.D.A.I.) (Issuance of e-Insurance Policies) Regulations, 2016, which have come into Force, from 1 st October, 2016:

—Every Insurer, soliciting Insurance-Business through Electronic-Mode, shall create an e-Proposal-Form, Similar to the Physical Proposal-Form, Approved by the Authority; and such Form should enable Capture-of-Information in Electronic-Form, that would enable Easy Processing and Servicing.‖

—e-Proposal-Form shall have a Provision to Capture the electronic-Insurance Account (e-I-A) Number of the Prospect, and the Insurer shall facilitate its Creation, whenever the electronic-Insurance-Policy is proposed to be issued through the Insurance Repository System‖.

—The Prospect should have Own electronic-Signature, while furnishing the Details in e-Proposal-Form‖. Here, the Agent can help the Customer to open an e-Insurance Account (e-I-A), if required, through the Registered Insurance Repository.

3. Acceptance stage

a) Cover note

It is the agent‘s responsibility to ensure that the cover note is issued by the company, where applicable, to the insured. Promptness in this regard communicates to the client that his interests are safe in the hands of the agent and the company.

b) Delivery of the policy document

Delivery of the policy is another major opportunity that an agent gets to make contact with the customer. If company rules permit a policy document being delivered in person, it may be a good idea to collect it and present the document to the customer. If the policy is being sent directly by mail, one must contact the customer, once it is known that the policy document has been sent. This is an opportunity to visit the customer and explain anything that is unclear in the document received. This is also an occasion to clarify various kinds of policy provisions, and

the policy holder"s rights and privileges that the customer can avail of. This act demonstrates a willingness to provide a level of service beyond the sale.

This meeting is also an occasion to pledge the agent‘s commitment to serving the customer and communicating full support.

In View of Insurance Regulatory and Development Authority of India (I.R.D.A.I.) (Issuance of e-Insurance Policies) Regulations, 2016, which have come into Force, from 1 st October, 2016:

—Every Insurer shall issue Electronic Insurance-Policies, in Case of: All Motor Retail Insurance and Individual Travel (Over-Seas) Insurance, and the Policies that fulfil the Criteria, in Terms of Sum-Assured (Rupees 10 Lakhs in Case of Pure Term-Assurance [excluding, Term-Assurance with Return-of-Premium(s)] and All Retail General Insurance except Motor Insurance, and Individual Personal Accident (P.A.) Insurance and Domestic Travel Insurance, and Rupees 1 Lakh in Case of Other Than Pure Term-Assurance [including, Term-Assurance with Return-of-Premium(s)], and Rupees 5 Lakhs in Case of Individual HealthInsurance} or Premium {Single or Annual, Equal To or Exceeding Rupees 10,000/- [Rupees 5,000/- in Case of All Retail General Insurance Policies except Motor Insurance]}, or, Pension-Per-Annum (Rupees 10,000/- in Case of Immediate Annuities).‖

Here, the Agent can help the Customer to open an e-Insurance Account (e-I-A), through the Registered Insurance Repository.

The next logical step would be to ask for the names and particulars of other individuals he knows who can possibly benefit from the agent‘s services. If the client can himself contact these people and introduce the agent to them, it would mean a great breakthrough in business.

c) Policy renewal

Non-life insurance policies have to be renewed each year and the customer has a choice at the time of each renewal, to continue insuring with the same company or switch to another company. This is a critical point where the goodwill and trust created by the agent and the company gets tested.

Although there is no legal obligation on the part of insurers to advise the insured that his policy is due to expire on a particular date, yet as a matter of courtesy and decidedly a healthy business practice, insurers issue a —Renewal Notice - one month in advance of the date of expiry, inviting renewal of the policy. The agent needs to be in touch with the customer well before the renewal due date to remind the latter about renewal so that he can make provision for the same.

The relationship gets strengthened by keeping in touch with the client from time to time, by greeting him on some occasion like a festival or a family event. Similarly when there is a moment of difficulty or sorrow by to offering assistance.

4. The claim stage

The agent has a crucial role to play at the time of claim settlement. It is her task to ensure that the incident giving rise to the claim is immediately informed to the insurer and that the customer carefully follows all the formalities and assists in all the investigations that may need to be done to assess the loss.

Tips for Insurance Companies to Improve their Customer Service

1. Consider Customer Complains as Opportunities

Considering customer complaints as opportunities can greatly benefit insurance companies in improving their customer service. Rather than viewing customers‘ complaints as negative feedback, insurance companies can adopt a proactive mindset and recognize them as valuable opportunities to help them grow and improve.

Each complaint offers a unique opportunity to identify and address areas of dissatisfaction, refine processes, and enhance the overall customer experience. Insurance companies can enhance customer satisfaction, strengthen relationships, and build trust by actively listening to customers‘ concerns and taking the right action to resolve them as soon as possible.

Moreover, by analyzing the patterns and trends in complaints, companies can identify systemic issues and make necessary changes in their strategies to prevent similar problems from occurring in the future. This customer-centric

approach ensures continuous improvement and helps insurance companies evolve to meet their valued customers‘ needs.

2. Simplify Policies and Enhance Transparency

Simplifying policies and enhancing transparency is vital in improving insurance companies‘ customer service. The complexity of insurance policies can often lead to confusion and frustration for customers. By simplifying policies and presenting them clearly and concisely, insurance companies can make it easier for customers to understand their coverage and benefits.

This simplification enhances the customer experience in insurance and helps customers make informed decisions. Enhancing transparency by providing clear information about terms, conditions, and claims processes builds trust and credibility. When customers have a transparent view of how their insurance works, they feel more confident and satisfied with their coverage.

3. Follow Up with Your Customers

Following up with customers can significantly impact customer experience in insurance companies. By reaching out to customers after interactions or during critical stages of their insurance journey, companies showcase a genuine commitment to their customers. It shows that the company values the customers and provides an opportunity to address their concerns.

Additionally, following up allows insurance companies to gather valuable feedback, enabling them to continuously improve their processes, products, and services. This way, insurance companies can strengthen customer relationships, increase customer loyalty, and differentiate themselves in a competitive market.

4. Empower Customers with Self-Service Option

Empowering customers with self-service options is a transformative approach that can significantly enhance their experience and improve customer service in insurance companies. With the help of self-service platforms, such as a knowledge base, video tutorials, FAQs, community forums, etc., policyholders can better understand the policies.

Self-service reduces reliance on traditional customer service channels and empowers customers to resolve simple queries independently. It streamlines processes, reduces response times, offers quick and efficient solutions and increases customer satisfaction. Furthermore, self-service capabilities enable insurance companies to manage their resources more strategically by allowing the service agents to focus on more complex issues.

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Simplifying claim forms and providing clear instructions can significantly accelerate the process and eliminate unnecessary complexities. When customers experience a smooth and efficient claims process, it builds their confidence in the insurance company and reduces their stress during challenging times.

6. Use Real-time Analytics to Monitor Customer Interactions

Utilizing real-time analytics to monitor customer interactions can be a game-changer. By leveraging advanced analytics tools, insurance companies can gain valuable real-time insights into customer behavior, preferences, and satisfaction levels.

By monitoring customer interactions in real-time, companies can identify patterns and make data-backed decisions to optimize their customer service strategies. Analyzing customer interactions in real-time enables insurance companies to offer personalized recommendations, deliver timely support, and resolve issues more effectively.

7. Employ a Help Desk Software to Offer Better Support

Employing a help desk software solution is a valuable strategy that can significantly improve customer service. By implementing robust help desk software, insurance companies can streamline their support processes, centralize customer inquiries, and ensure timely and efficient resolution of issues. This software allows customer service agents to track and manage customer queries from when they are generated till their resolution.

It also facilitates seamless collaboration among support teams, ensuring customer inquiries are handled accurately. Help desk software provides a comprehensive view of customer interactions by offering companies insights into common pain points and areas for improvement. By leveraging this, insurance companies can easily deliver personalized support as per their customers‘ needs.

8. Personalize Everything for Your Customers

Personalizing everything for customers is a powerful approach that can greatly enhance their experience. By tailoring interactions, suggestions, and offerings to individual customers, insurance companies can create a sense of individuality and demonstrate a deep understanding of their policyholders‘ needs.

Personalization can be achieved by leveraging customer data and employing advanced analytics. Personalization also extends to communication channels, ensuring customers receive information through their preferred channels. Ultimately, personalization enhances the customer service experience in the insurance industry, demonstrating that customers are valued and understood as individuals.

9. Implement Fraud Detection Systems

By adopting robust fraud detection technologies and systems, insurance companies can effectively identify and mitigate fraudulent activities, protecting themselves and their honest policyholders. Detecting and preventing fraud protects the company‘s financial stability and ensures accurate customer coverage.

By implementing these systems, insurance companies demonstrate their commitment to providing customers with a secure and trustworthy environment. Fraud detection systems can create a positive customer experience by reducing the potential impact of fraudulent claims on legitimate policyholders.

10. Enhance Data Security and Privacy

Enhancing data security and privacy is the key to improving customer service in insurance companies. Customers trust insurance companies with sensitive personal and financial information, and companies must protect that data from unauthorized access or breaches.

Insurance companies can ensure the protection of their sensitive information by implementing robust data security measures, including encryption, access controls, and regular security audits.

Enhanced data security mitigates the risk of identity theft or fraud and protects the insurance company‘s reputation. When customers have peace of mind knowing that their data is secure, they experience a higher level of trust and satisfaction with the company.

11. Integrate Omnichannel Approach

Insurance companies can provide a seamless and consistent customer journey across multiple channels by adopting an omnichannel approach. Customers can engage with the company through various channels such as phone, email, chatbots, social media, or in-person interactions, flexibly switching between channels effortlessly. This integration gives customers a unified experience, regardless of their chosen channel.

12. Collect Feedback to Improve Service

Collecting feedback to improve service is a vital practice that can greatly enhance customer service. By actively seeking customer feedback, insurance companies gain valuable insights into their satisfaction levels, pain points, and areas for improvement. This feedback can be collected through surveys, feedback forms, or even through direct interactions with customer service agents.

Additionally, collecting feedback demonstrates a commitment to continuous improvement and customer-centricity, building policyholders‘ trust and loyalty. By acting on customer feedback and making necessary adjustments, insurance companies can provide a more tailored and satisfying customer service experience in the insurance industry.

Duties and responsibilities of Insurance Agents

The following is a closely curated list of the duties and responsibilities of a customer service representative within the insurance sector:

1. Attend calls to provide information related to insurance policies and informing about any modifications in the policy to prospective as well as current clients.

2. Keep the customers well-informed and satisfied every time.

3. Examine whether the necessary changes were made in so as to resolve the customer‘s problems.

4. Cancel accounts and inform customers about claim investigation results.

5. Suggest improvements in packaging, products, service, shipping, procedures, or billing methods to avoid future problems.

6. Solicit sale of additional or new products and services.

7. Maintain strong customer relationships.

8. Keep customer transactions and interaction records including all the complaints, inquiries, comments, and actions performed.

9. Send mails, newsletters, and other correspondence forms to customers.

10. Protect the company reputation.

11. Offer price quote information to prospective clients.

Role of Insurance Agents in Customer Service

Insurance agents play a pivotal role in customer service within the insurance industry, serving as the primary point of contact between the insurance company and the client. Their responsibilities span various aspects of customer interaction and support, ensuring that clients receive comprehensive, personalized, and efficient service. Here are the key roles of insurance agents in customer service:

1. Personalized Service and Relationship Building

i. Understanding Customer Needs

Insurance agents take the time to understand the specific needs, financial situations, and preferences of their clients. This personalized approach allows them to recommend the most suitable insurance products.

ii. Ongoing Relationship Management

Agents maintain continuous contact with clients, providing updates, advice, and support. Building strong relationships helps in gaining client trust and loyalty.

2. Guidance and Education

i. Explaining Products and Policies

Agents offer detailed explanations of different insurance products, coverage options, terms, and conditions, helping clients make well-informed decisions.

ii. Answering Queries

They address any questions or concerns clients might have about their policies, claims processes, and insurance terms, ensuring a clear understanding of the coverage.

3. Claims Assistance

i. Filing Claims

Agents assist clients in filing insurance claims, ensuring all necessary documentation is completed correctly and submitted.

ii. Claims Follow-up

They follow up on claims to ensure timely processing and resolution, advocating for clients if there are any issues or delays.

4. Risk Assessment and Management

i. Risk Evaluation

Agents help clients assess their risks and determine the appropriate insurance coverage to mitigate those risks.

ii. Loss Prevention Advice

They provide advice on how clients can reduce their risks and prevent potential losses, which can result in lower premiums and fewer claims.

5. Renewals and Policy Reviews

i. Policy Reviews

Agents regularly review clients‘ policies to ensure they have adequate coverage as their circumstances change, recommending necessary adjustments.

ii. Renewal Reminders

They remind clients of upcoming policy renewals and assist in the renewal process, ensuring there is no lapse in coverage.

6. Customer Advocacy

i. Representation

Insurance agents act as intermediaries between clients and the insurance company, advocating for their clients‘ best interests.

ii. Problem Resolution

They help resolve any issues or disputes that arise with the insurance company, ensuring that clients' concerns are addressed promptly.

7. Market Expertise

i. Staying Informed

Agents stay updated on changes in the insurance market, new products, and industry regulations to provide clients with the most current and relevant advice.

ii. Comparative Analysis

They compare products from different insurers to offer clients the best options in terms of coverage and cost.

8. Administrative Support

i. Documentation and Paperwork

Agents handle the administrative tasks related to insurance policies, such as completing forms, managing paperwork, and ensuring that records are accurate and up-to-date.

ii. Policy Customization

They help customize policies to meet the specific needs of clients, including adding necessary endorsements and riders.

9. Financial Advice

i. Cost-Benefit Analysis

Agents help clients understand the financial implications of different insurance options, providing cost-benefit analyses to aid in decision-making.

ii. Budget Management

They assist clients in managing their insurance budget effectively, ensuring that they get adequate coverage without overspending.

10. Customer Support and Accessibility

i. 24/7 Availability

Many agents offer around-the-clock support, ensuring that clients can get assistance whenever they need it.

ii. Emergency Assistance

In case of emergencies, agents provide immediate support and guidance, helping clients navigate urgent situations.

Functions of an Insurance Agent in India

Following are the functions of an insurance agent in India:

1. **Soliciting and procuring new business**:

The primary function of an insurance agent is to solicit prospective clients and procure new business. The agent should make efforts to get new insurance proposals.

2. **Conserve the existing business**

In addition to procuring new business, an insurance agent in India must also ensure that the existing customers continue with the policies of the company he represents and prevents them from lapsing on account of default in payment of premium.

3. **Assistance in selection of the best suitable policy**

An insurance agent, though representing a particular company only, should guide the prospective client in selecting the best possible policy according to the requirements of the client.

4. **Enquire into the client's details**

An insurance agent is supposed to enquire into all the necessary details of the client with a view to assess the extent of risk and to assist the client in taking a claim accordingly.

5. **Assuring the date of birth and other related medical information**:

An insurance agent should always assure himself of all the necessary medical information related to the client, including the date of birth of the insured, so that no technical complications arise in future with respect to the settlement of claims. It further helps in the future settlement of policies.

6. **Ensure that the policyholder averts instances of default**

It is also the duty of the insurance agent in India to remind the policyholder about the due date of making payment on his premium and prevent the instances of default in payment of premiums. This helps to avoid the applicable penalties for late payments.

7. **Preventing the policy from lapsing**

An insurance agent should inform and remind the policyholder of all the possible disadvantages that may accrue to the policyholder on account of the lapse of an insurance policy.

8. **Remind the insured about the importance of the nominee**:

An important duty on the part of an insurance agent is to inform the policyholder about the need to appoint a nominee in his policy. The appointment of a nominee helps in the future settlement of policies without any ambiguity.

9. **Preparation of the required documentation**

An insurance agent is required to guide and assist the prospective client in the preparation of the necessary documentation for the required policy, such as birth certificate, medical certificate, major injuries etc.

4.1.4 Agent's communication and Customer Service

In customer service, communication means everything. Whether a customer needs help with a product purchase or is completely frustrated to the point of leaving the brand, customer service agents need to use the right skills to connect with customers in a way that leaves them calmer, satisfied, and confident in the brand. Here are seven rules for effective customer service communication that will empower agents and customers alike.

1. Personalize the interaction

Customers often seek a human touch when contacting a brand, so agents should be sure to personalize the experience right from the start. It's important for agents to introduce themselves, address the customer by name, and ask in an authentic tone just how they may be of service. Customers should be able to feel the agent's willingness to help them, so a cheerful tone on the phone and positive language in written communication are essential to a personalized experience.

2. Avoid negative phrases

Simply put, there's no place for negativity or doubt in customer service. A frustrated customer wants to hear that there *is* a solution to a problem. Agents who may not have immediate answers should refrain from using any language that suggests an inability to solve a problem or lack of knowledge. For example, they should avoid words such as —can't‖ or —don't‖ and offer to find the solution with determined, positive language. Negative phrases may not only frustrate a customer but make him or her lose confidence in a brand.

3. Use positive language with a touch of empathy

Agents who use positive language and show confidence are far more likely to appease and satisfy customers. Agents should use positive phrases such as —I can,‖

—I will,‖ and —I understand‖ to connect with customers. Such language is reassuring, proactive, and empathetic and restores customer confidence.

4. Listen closely and avoid interrupting the customer

Customers want to be heard, so agents need to listen as much as they offer support. Agents should always welcome customers to explain their issues in full before providing solutions. Interrupting a customer implies a lack of respect or empathy for a problem, so it‘s important to let them talk and politely offer a solution once they are ready to hear it.

5. Use consistent brand vocabulary

One critical aspect of effective customer service communication is using consistent brand terms that customers will understand. When agents communicate with customers, the vocabulary used to describe products or services should match the language on the company website, mobile app, IVR menu options, and social media sites. Brands should be consistent in the vocabulary they use across all channels, and agents should be skilled in the brand lexicon and use it accurately during service interactions for faster, more efficient service.

6. Give thorough answers to technical questions

Customers may not possess the technical knowledge needed to understand a problem, and agents need to be sensitive to this. Consider, for example, a situation in which a customer contacts a telecommunications company regarding a technical issue or perhaps a retail company for a problem on the website‘s checkout page. Agents should make customers feel at ease when the situation is technical and offer clear explanations in terms the customer can understand.

7. Make communication clear and concise

Customers want thorough answers, but they also value their time. Agents therefore need to remember that one aspect of effective customer service communication is keeping the exchange fairly concise and always relevant, whether it be verbal or written. This point is especially vital on social media, chat, and SMS, as they are channels defined by concise communication. Emails should be kept to a length that gives just the right amount of relevant information. Lastly, agents should strive to use a natural, conversational tone in their communication both on the voice channel and in written form to keep a personal connection with the customer. On non-voice channels, it‘s especially necessary to humanize the experience.Effective

customer service communication combines a personalized approach with efficient practices that save customers time and frustration while ultimately winning their loyalty.

Let's Sum Up

Customers provide the bread and butter of a business and no enterprise can afford to treat them indifferently. The role of customer service and relationships is far more critical in the case of insurance than in other products.

Considering customer complaints as opportunities can greatly benefit insurance companies in improving their customer service. Rather than viewing customers' complaints as negative feedback, insurance companies can adopt a proactive mindset and recognize them as valuable opportunities to help them grow and improve.

The first point for service is the point of sale. One of the critical issues involved in purchase of non-life Insurance is to determine the amount of coverage to be bought.

The agent has to support the customer in filling out the proposal for insurance. The insured is required to take responsibility for the statements made therein.

The agent has a crucial role to play at the time of claim settlement. It is her task to ensure that the incident giving rise to the claim is immediately informed to the insurer and that the customer carefully follows all the formalities and assists in all the investigations that may need to be done to assess the loss.

The primary function of an insurance agent is to solicit prospective clients and procure new business. The agent should make efforts to get new insurance proposals.

An insurance ageaant, though representing a particular company only, should guide the prospective client in selecting the best possible policy according to the requirements of the client.

CHECK YOUR PROGRESS – QUIZ - 14

1. What is a crucial aspect of customer service in the insurance industry?

a. Speed of claim processing
b. Selling additional policies
c. Marketing campaigns

d. Premium discounts

2. How do insurance agents contribute to customer service through communication?

a. By avoiding communication with clients

b. By providing clear explanations of policy terms and benefits

c. By pressuring clients to purchase additional coverage

d. By withholding information about claim procedures

3. What is the primary goal of customer service?

a. Increase profits

b. Resolve customer complaints

c. Improve product quality

d. Provide exceptional service and support

4. What is the term used for measuring customer satisfaction after an interaction with customer service?

a. Customer Loyalty Index (CLI)

b. Customer Effort Score (CES)

c. Net Promoter Score (NPS)

d. Customer Happiness Quotient (CHQ)

5. What is the purpose of a knowledge base in customer service?

a. Store customer information for marketing purposes

b. Provide self-service resources for customers

c. Streamline internal communication between employees

d. Monitor customer behavior on the company‘s website

Answers :

1. a. Speed of claim processing
2. b. By providing clear explanations of policy terms and benefits
3. d. Provide exceptional service and support
4. c. Net Promoter Score (NPS)
5. b. Provide self-service resources for customers

SECTION 4.2: ETHICAL BEHAVIOUR IN INSURANCE

4.2.1 Ethical behavior in insurance

Serious concerns are voiced about the proprieties in business, because increasingly there are reports of improper behaviour. Some of the world"s biggest companies have been found to have cheated through false accounts and dishonest audit certification. The funds of banks have been misused by their managements to bolster the greed of some friends. Officials have used their authority to promote personal benefits. Increasingly, people who are trusted by the community to perform their tasks are seen to have betrayed the trust. Personal aggrandisement and greed prevails.

Consequently, there is increasing discussion about accountability and corporate governance, all of which together can be called —Ethics‖ in business. Acts like the Right to Information Act‗ and developments like Public Interest Litigation‗ have assumed considerable importance as instruments to achieve better accountability and governance.

Ethical behaviour automatically leads to good governance. When one does her duty conscientiously and sincerely, there is good governance. Unethical behaviour shows little concern for others and high concern for self. When one tries to serve self-interest through one‘s official position, there is unethical behaviour. It is not wrong to look after one‘s interests. But it is wrong to do so at the cost of the interests of others.

Insurance is a business of trust. Issues of propriety and ethics are extremely important in this business of insurance. Breach of trust amounts to cheating and is wrong. Things go wrong when wrong information is given to the prospects tempting them to buy insurance or the plan of insurance suggested does not cater to all the needs of the prospect.

Unethical behaviour happens when the benefits of self are considered more important than of the other. The code of ethics spelt out by the IRDA in the various regulations is directed towards ethical behaviour.

While it is important to know every clause in the code of conduct to ensure that there is no violation of the code, compliance would be automatic if the insurer and its representatives always kept the interests of the prospect in mind. Things go wrong when the officers of insurers become concerned with the targets of business, rather than the benefits to the prospect.

Characteristics

Some characteristics of ethical behaviour are:

a) Placing best interests of the client above one‟s own direct or indirect benefits

b) Holding in strictest confidence and considering as privileged, all business and personal information pertaining to client‟s affairs

c) Making full and adequate disclosure of all facts to enable clients make informed decisions

4.2.2 GUIDELINES FOR GRIEVANCE REDRESSAL BY INSURANCE COMPANIES

Further to Regulation 5 of IRDA Regulations for Protection of Policyholders Interests, 2002 which provides for insurers to have in place speedy and effective grievance redressal systems, and in terms of the Authority‘s powers and functions as enunciated in Section 14 of IRDA Act, 1999, the IRDA hereby issues the following guidelines pertaining to minimum time-frames and uniform definitions and classifications with respect to grievance redressal by insurance companies.

These guidelines are applicable for disposal of ―grievances/complaints‖ as defined herein. All insurers shall ensure that the guidelines of the Authority are followed strictly.

1. Definition of ―Grievance/Complaint”:

There shall be a uniform definition of ―Grievance or Complaint‖. Grievances shall be clearly distinguished from Inquiries and Requests, which do not fall within the scope of these guidelines.

The following definition of grievance shall be adopted:

Grievance/Complaint: A —Grievance/Complaintll is defined as any communication that expresses dissatisfaction about an action or lack of action, about the standard of service/deficiency of service of an insurance company and/or any intermediary or asks for remedial action.

On the other hand, an Inquiry and Request would mean the following:

Inquiry: An —Inquiryll is defined as any communication from a customer for the primary purpose of requesting information about a company and/or its services.

Request: A —Requestll is defined as any communication from a customer soliciting a service such as a change or modification in the policy.

2. Grievance Redressal Policy:

Every insurer shall have a Board approved Grievance Redressal Policy which shall be filed with IRDA.

3. **Grievance Officer/s**:

Every insurer shall have a designated Grievance Officer of a senior management level. Senior Management would mean either the CEO or the Compliance Officer of the company. Every office other than the Head/Corporate/Principal officer of an insurer shall also have an officer nominated as the Grievance Officer for that office.

4. Grievance Redressal System/Procedure:

Every insurer shall have a system and a procedure for receiving, registering and disposing of grievances in each of its offices. This and all other relevant details along with details of Turnaround Times (TATs) shall be clearly laid down in the policy. While insurers may lay down their own TATs, they shall ensure that the following minimum time-frames are adopted:

(a). An insurer shall send a written acknowledgement to a complainant within 3 working days of the receipt of the grievance.

(b). The acknowledgement shall contain the name and designation of the officer who will deal with the grievance.

(c). It shall also contain the details of the insurer‘s grievance redressal procedure and the time taken for resolution of disputes.

(d). Where the insurer resolves the complaint within 3 days, it may communicate the resolution along with the acknowledgement.

(e). Where the grievance is not resolved within 3 working days, an insurer shall resolve the grievance within 2 weeks of its receipt and send a final letter of resolution.

(g). Where, within 2 weeks, the company sends the complainant a written response which offers redress or rejects the complaint and gives reasons for doing so,

(i). the insurer shall inform the complainant about how he/she may pursue the complaint, if dissatisfied.

(ii). the insurer shall inform that it will regard the complaint as closed if it does not receive a reply within 8 weeks from the date of receipt of response by the insured/policyholder. Any failure on the part of insurers to follow the above-mentioned procedures and time-frames would attract penalties by the Insurance Regulatory and Development Authority. It may be noted that it is necessary for each and every office of the insurer to adopt a system of grievance registration and disposal.

5. **Turnaround Times**:

There are two types of turnaround times involved.

(i). The service level turnaround times, which are mapped to each classification of complaint (which is itself based on the service aspect involved).

(ii). The turnaround time involved for the grievance redressal. As to (i), the TATs are as mapped to the classification and prescribed by the Authority to insurers. These TATs reflect the time-frames as already laid down in the IRDA Regulations for Protection of Policyholders Interests and more, as, wherever considered necessary(for certain service aspects not getting specifically reflected in the Regulations), specific TATs are indicated in the classification and mapping provided by the

Authority. As regards (ii) above, the minimum TATs required to be followed shall be as prescribed in guideline 4 (a) to (g) as prescribed above.

6. Closure of grievance:

A complaint shall be considered as disposed of and closed when

(a). the company has acceded to the request of the complainant fully.

(b). where the complainant has indicated in writing , acceptance of the response of the insurer.

(c). where the complainant has not responded to the insurer within 8 weeks of the company‘s written response.

(d) where the Grievance Redressal Officer has certified that the company has discharged its contractual, statutory and regulatory obligations and therefore closes the complaint.

7. Categorisation of complaints:

a). Categorisation of complaints as prescribed by the Authority from time to time shall be adopted by insurers and incorporated in their systems.

b). The present classification prescribed by the Authority is placed at **Annexure A.** All insurers shall provide for these classification categories in their respective systems.

8. Minimum software requirements:

It is necessary for insurers to have automated systems that will enable online registration, tracking of status of grievances by complainants and periodical reports as prescribed by IRDA. The system should also be one which can integrate seamlessly with the Authority‘s system in the manner prescribed by the Authority. The Authority shall define these requirements from time to time and insurers shall ensure that they provide for such software/system modifications as may be required. The objective is to create the required industry level database and systems that would enable speedy and effective redressal of complaints.

9. Calls relating to grievances:

Insurers shall also have in place a system to receive and deal with all kinds of calls including voice/e-mail, relating to grievances, from prospects and policyholders. The system should enable and facilitate the required interfacing with IRDA‘s system of handling calls/e-mails.

10. Publicizing Grievance Redressal Procedure:

Every insurer shall publicize its grievance redressal procedure and ensure that it is specifically made available on its website.

11. Policyholder Protection Committee:

Every insurer that ensure that the Policyholder Protection Committee, as stipulated in the guidelines for Corporate Governance issued by the Authority, is in place and is receiving and analyzing the required reports from the management and is carrying out all other requisite monitoring activities.

4.2.3 Insurance Grievance Redressal Mechanism

The Guidelines for Redressal of Grievances by Insurance Companies, issued by IRDAI, define "complaint/complaint" as "any communication". Who express dissatisfaction about the action or lack of action regarding the level of service/lack of service of an insurer and/or an intermediary, or request for corrective action". When an insured person withdraws from the activities of the insurer and feels aggrieved, he should first approach the insurer for redressal.

This provision is in line with the principle of primary jurisdiction, which states that if a matter is of such a nature that it requires a determination by an expert and specialized administrative body First aid should be obtained from that body before hearing. An appeal. Applied to the courts of justice. The different ways of redressing insurance complaints are as follows:

a. In-house Grievance Redressal Mechanism
b. Under the provisions of the Insurance Regulatory and Development Authority (Protection of Insured Interests) Regulations, 2017[9], mandatory for all insurer effective processes and mechanisms for efficiently handling complaints and claims of the insured. As a result, an aggrieved policyholder first has to knock on the door of the insurer concerned to get redressal in the form of an internal grievance mechanism.
c. The insurer in question has to settle the matter fairly and reasonably. In addition, every insurer should have a designated Grievance Officer at the senior management level. Senior Management shall mean the Director General or Compliance Officer of the Company.

d. Any office other than the Head Office/Corporate/Head Office of the insurer shall also have a designated Grievance Officer for that office. Every insurer is entitled to have at each of its offices a system and procedure for the reception, registration, and disposal of complaints. Insurers are free to set their own response time, but they must ensure that the following minimum timelines are met:

An insurer should send a written acknowledgment of receipt, which should include:

- Send the name and designation of the officer who will deal with the complaint to the complainant within three working days.
- Receipt of the complaint. need to be recognized in addition.
- Contains details of the insurer's complaint procedure and the time required for dispute resolution.
  - But if the insurer settles the claim within three days, it may intimate the settlement with acknowledgment of receipt.
  - If the claim is not resolved within three business days, the insurer should resolve the claim within two weeks of receipt of the claim and send a final resolution letter.

From the insurer's side, the maximum period for resolving the matter is two weeks only. IRDAI will impose a ban if an insurer does not follow the above procedures and timelines[11]. Similarly, it is expected that the policyholder protection committee will be constituted by the insurers to receive and analyse the reports required by the management. In addition to the above, insurers are expected to put in place a system to receive and handle all types of calls including voice/email calls relating to complaints from potential customers[12]. The system should enable and facilitate the necessary interface with the IRDAI system for handling insured calls/emails.

e. **Insurance Regulatory and Development Authority of India (IRDAI)** IRDAI, with the mission to "protect the interests of the insured, regulate, promote and ensure the orderly development of the insurance industry" also it lets the insured get the damage repaired but does not solve the accident itself. Currently, IRDAI has the following systems in place to facilitate repairs[13]:

i. IRDAI Grievance Redressal Centre: Aggrieved insured can register his/her complaint by calling on the toll-free number or by sending an email.

ii. Integrated Claims Management System: It is an online consumer claims registration system through which claims are submitted simultaneously to IRDAI and the concerned insurer on a turn-by-turn basis.

This will provide an effective tool in the hands of IRDAI for monitoring complaints. Thus, it can be said that IRDAI has provided an effective platform to protect the interests of the insured.

Civil Courts

For redressal of grievances, the insured can also take recourse to courts of law. As is well known, in the common law system, deciding a case as per legal procedure is very time consuming and costly which may lead to undue delay. Therefore, it can be said that this resource will not be of much use in the case of insurance, where the insured needs prompt, cost-effective, efficient and unbiased complaint resolution.

Consumer Protection Forums

Since insurance is a 'service' as per the Consumer Protection Act of 1986, the insured can approach a consumer forum for the redressal of grievances. A lot of cases have been decided by the consumer forums on this subject. Redressal under this Act is said to be very simple, fast, and cheap, but the Law Commission of India has stated that "under the Consumer Protection Act 1986, the remedy is no longer quick or effective.

Let’s Sum Up

Serious concerns are voiced about the proprieties in business, because increasingly there are reports of improper behaviour.

Ethical behaviour automatically leads to good governance. When one does her duty conscientiously and sincerely, there is good governance.

The Guidelines for Redressal of Grievances by Insurance Companies, issued by IRDAI, define "complaint/complaint" as "any communication".

IRDAI, with the mission to "protect the interests of the insured, regulate, promote and ensure the orderly development of the insurance industry" also it lets the insured get the damage repaired but does not solve the accident itself.

CHECK YOUR PROGRESS – QUIZ - 15

1. The person who seeks protection against a risk and to whom the insurance policy is issued is known as . . . . . .
    a. Insurer
    b. Customer
    c. Insured
    d. Creditor
2. What is the purpose of a grievance redressal system in the insurance sector?
    a. To increase premiums
    b. To delay claim settlements
    c. To address customer complaints and resolve disputes
    d. To ignore customer feedback
3. Which of the following demonstrates ethical behavior in insurance?
    a. Misrepresentation of policy terms
    b. Fair and transparent dealings with clients
    c. Discriminatory practices
    d. Withholding claim payments
4. Which of the following constitutes essentials of a good grievance procedure except ?
    a. Flexible
    b. Simple
    c. Unbound
    d. Set up with participation of all leaders of the employees
1. In set – ladder procedure of grievance handling which is the foremost step, an aggrieved employee must undertake __
    a. Going to the head of the department
    b. Filing of written grievance
    c. Going to the labour courts

d. Approach to joint grievance committee

Answers :

1. c. Insured
2. c. To address customer complaints and resolve disputes
3. b. Fair and transparent dealings with clients
4. c. Unbound
5. b. Filing of written grievance

SECTION 4.3: INSURANCE OMBUDSMAN

4.3.1 Insurance Ombudsman

The word 'ombudsman' is of Swedish origin and is used for a person who listens to the problems of the common people. The ombudsman is supposed to receive and investigate complaints against government departments and public offices. In India too, this organization has attracted the attention of common people due to being a transparent and corruption-free resource. Sectors of Banking, Telecom, etc. They already have Lokpal.

In the field of insurance, the institution of the Insurance Ombudsman was created by the Redressal of Public Grievances Rules, 1998 (RPG Rules). These rules apply to all insurance companies engaged in the general and life insurance business.

At present, there are 17 Insurance Ombudsman Centres at various places in India: Ahmedabad, Bengaluru, Bhopal, Bhubaneshwar, Chandigarh, Chennai, Delhi, Ernakulam, Guwahati, Hyderabad, Jaipur, Kolkata, Lucknow, Mumbai, Noida, Patna, and Pune. Some ombudsmen have jurisdiction over more than one state and some states have two ombudsman centres.

For example, for some districts in the state of Uttar Pradesh, the Lucknow Lokpal has jurisdiction and for other districts, the Noida centre has jurisdiction. The Guwahati centre of the Lokpal has jurisdiction over seven states.

Insurance Ombudsman – Meaning & Overview

The institution of insurance ombudsman in India was established through the Governing Body of Insurance Council (GBIC) under the Redressal of Public

Grievances Rules 1998. Subsequently, the insurance ombudsman was set up after the government of India passed a notification dated 11th November, 1998.

The insurance ombudsman is set up for quick disposal of the grievances of the insured customers and to resolve their grievances. It is also responsible for building policyholders‘ confidence in the system.

Under the insurance ombudsman scheme, any person who has a grievance against an insurer (insurance company), may himself or through their legal heirs, nominee or assignee, make a complaint in writing to the Insurance Ombudsman within whose territorial jurisdiction the branch or office of the insurer.

Due to the insurance ombudsman, it has become possible to generate and sustain the faith and confidence among the insurers and the customers.

Presently, insurance ombudsman centres are widespread across the country at 17 different locations including Ahmedabad, Bengaluru, Bhopal, Bhubaneswar, Chandigarh, Chennai, Delhi, Guwahati, Hyderabad, Jaipur, Kochi, Kolkata, Lucknow, Mumbai, Pune, Patna, and Noida.

Objectives:

'Insurance Ombudsman' is an institution to resolve all complaints relating to the settlement of claims by insurance companies in a cost-effective, efficient and fair manner. In simple words, it is believed that the Ombudsman, behind every insurance policy, is always ready to hear complaints against insurers.

"The whole purpose of appointing Lokpal is to check abuse of power by statutory bodies and to ensure that disputes are resolved." The Delhi High Court has also said that the institution of Insurance Ombudsman is an independent institution and Quasi-judicial forum for the redressal of grievances of any individual against an insurer.

Insurance Ombudsman: Eligibility, Appointment, Tenure, and Jurisdiction

A person who has experience or experience in the industry, civil service, administrative service, judicial service, etc. May be appointed by the Governing Body from a panel prepared by a committee composed of the following:

a. Chairman of IRDAI - Chairman
b. two representatives of the Insurance Council, one from the life insurance business and one from the general insurance business, members respectively
c. a representative of the Central Government-Member

The discretion to decide the number of Ombudsman rests with the Governing Body. The term of Lokpal is three years or till the incumbent reaches the age of 65 years, whichever is earlier, but re-election is not allowed. City guards can be removed from their duties for serious misconduct committed during their mandate.

Procedure before Insurance Ombudsman:

When an insurer does not satisfy the complaints of an aggrieved person, the aggrieved person himself or through his legal heir may approach the Ombudsman for the insured with a written complaint addressed to the Ombudsman within whose jurisdiction the branch of the insurer or The office is located.

The complaint must:

a. must be signed by the aggrieved person or his legal heir
b. clearly state the name and address of the complainant
c. clearly mention the name of the branch or office of the insurer against whom the complaint is lodged
d. Mention the fact which gives rise to the complaint
e. be supported by documents, if any, on which the claimant relies
f. state the nature and extent of the loss suffered by the claimant
g. clearly mention the compensation requested by the Ombudsma

Lodge a complaint with the Ombudsman unless:

a. where the claimant had made a written statement to the insurer named in the complaint before lodging the complaint with the Ombudsman and the

insurer rejected the complaint or the claimant had not received a response within a period of one month thereafter, the insurer Received his representation in question or the claimant is not satisfied with the reply given by the insurer.

b. the claim is not filed after one year from the time the insurer rejected the representation or sent its final response to the claimant's representation.
c. the complaint is not in respect of the same matter for which any proceedings are pending or were pending before any court, or consumer forum, or arbitrator.

The Ombudsman is free to adopt a procedure for dealing with a claim and may call for necessary documents from the parties in support of their respective claims and may, when considered necessary, collect factual information available from the insurance company.

In this regard, the Hon'ble Delhi High Court has also held that the Insurance Ombudsman is inter alia empowered to receive and consider complaints regarding delays/disputes relating to the settlement of claims. By virtue of Rule 14 of the said Regulation, the Ombudsman for the Insured Person may adopt any procedure other than the procedure mentioned in Rule 13 for attending to the claim. In accordance with the principles of natural justice, you must deal with a complaint fairly and equitably.

Appointment of the Insurance Ombudsman

The GBIC issues orders of appointment of the insurance ombudsman on the basis of the recommendations of a committee. This committee comprises one chairman each from the Life Insurance Corporation of India (LIC), Insurance Regulatory & Development Authority (IRDA), General Insurance Corporation of India (GIC), and a representative of the Central Government.

The insurance council consists of members from the Life Insurance Council and General Insurance Council formed under the Section 40 C of the Insurance Act of 1938.

Eligibility

An insurance ombudsman is drawn from the insurance industry, judicial, and civil services.

Terms of Office

The insurance ombudsman is appointed for a fixed term of 03 years or till the incumbent attains the age of 65 years, whichever is prior. The re-appointment of an ombudsman is not permitted.

Office Management

The ombudsman‘s office has a secretarial staff allotted by the insurance council. This secretarial staff is responsible for assisting the ombudsman in carrying out their duties.

The total expenses on the ombudsman and their staff is borne by the insurance companies that are the members of the insurance council.

Removal from office

The ombudsman can be removed from office on the basis of gross misconduct committed during the term of office. Then, the governing authority shall appoint such a person it deems fit to conduct with respect to the misconduct of the ombudsman. The misconduct enquiries are then forwarded to the IRDA, which may decide upon the action to be taken against the ombudsman. As per the recommendations of the IRDA, the governing body may terminate the services of the ombudsman, if found guilty.

Powers of the Insurance Ombudsman

The insurance ombudsman is responsible to perform the following functions:

1. Conciliation
2. Award making

The ombudsman is empowered to receive and lodge complaints as per the personal lines of the insurance from any person who has any grievance against any insurance company.

The complaint may relate to any grievance against the insurance company in the form of:

- Any partial or total repudiation of claims by an insurer
- Any dispute in respect to the premium paid or payable in terms of the policy
- Any dispute on the legal construction of the policies in sor far as such disputes relate to claims
- Delay in claim settlement
- Non-issue of any insurance document to the clients even after receipt of premium

The ombudsman‘s powers are restricted to insurance policies whose value does not exceed INR 20 lakhs. The awards passed by the insurance ombudsman must be honoured by the insurance companies within three months.

When to approach the Insurance Ombudsman with complaints

- The insurance company has rejected the prior complaint and
  - They did not resolve it to the insured‘s satisfaction
  - They did not respond to the complaint at all for 30 days
- The complaint pertains to any policy taken in the capacity as an individual and
- The value of the claim including expenses claimed is not above INR 30 lakhs

The complaints made in the above cases should be in writing as per the insurance ombudsman complaint format. Besides, the complaint must be filed within one year of the complaint rejection by the insurance company.

Lodging a Complaint with Insurance Ombudsman

Now that we have seen the appointment, powers, and functions of the ombudsman, let us also check how to lodge a complaint under the scheme.

An aggrieved person must write a complaint, addressing it to the insurance ombudsman of the jurisdiction under which the office of the insurance company falls. The legal heirs of the insured can also lodge the complaint. Before lodging a complaint:

- The aggrieved person should have made a representation to the insurer named in the complaint and the insurer either should have rejected the complaint or the complainant have not received any reply within 30 days after the concerned insurer has received his complaint or he is not satisfied with the insurance company‘s response
- The complaint is not made later than a year after the insurance company has replied
- The same complaint on the subject should not be pending with before any court, arbitrator, or consumer forum.

4.3.2 Insurance Regulatory and Development Authority of India (Insurance Brokers) Regulations,

In exercise of the powers conferred by sections 42D, 42E and 114A of the Insurance Act, 1938 (4 of 1938) read with sections 14 and 26 of the Insurance Regulatory and Development Authority Act, 1999 (41 of 1999), the Authority in consultation with the Insurance Advisory Committee, hereby makes the following regulations, namely: - Objective: The objective of these Regulations is to supervise and monitor insurance broker as an insurance intermediary

1. Short title and commencement —– (1) These regulations may be called the Insurance Regulatory and Development Authority of India (Insurance Brokers) Regulations, 2018. (2) These regulations shall come into force on the date of their publication in the Official Gazette and supersede Insurance Regulatory and Development Authority (Insurance Brokers) Regulations, 2013 with effect from such date.

4.3.3 Regulation of IRDA

Regulation 31 of the Insurance Regulatory and Development Authority of India (IRDA) is a crucial regulatory provision that aims to safeguard the interests of policyholders and promote transparency in the insurance industry. By understanding the essence of Regulation 31, individuals can gain insights into the rights and protections afforded to them as insurance consumers.

- The primary objective of Regulation 31 is to ensure that insurance brokers establish and maintain robust internal systems that can effectively handle the

challenges and demands of their business. By doing so, insurance brokers can provide efficient and reliable services to their clients while adhering to regulatory standards.

- The regulation recognizes that insurance brokerage firms vary in terms of size, clientele, and scope of operations. Therefore, it emphasizes the importance of adapting internal systems accordingly, ensuring that the systems are proportionate to the specific characteristics of the brokerage business.
- One of the key elements of Regulation 31 is the emphasis on the adequacy of internal systems. Adequate internal systems refer to the structures, processes, and controls put in place by insurance brokers to manage their operations, risks, and compliance obligations effectively. These systems encompass various aspects, such as governance, risk management, compliance, information technology, human resources, and customer service.
- Under Regulation 31, insurance brokers are required to conduct an assessment of their business operations to determine the appropriate level of internal system adequacy. This assessment should take into account factors such as the number of employees, the volume and complexity of transactions, the types of insurance products offered, the geographical spread of operations, and any specific risks associated with the business.
- Based on this assessment, insurance brokers must design and implement internal systems that can address these factors adequately.
- Insurance brokers must ensure that their internal systems facilitate efficient and secure data management. With the increasing reliance on technology in the insurance industry, brokers must have robust information technology systems in place to handle data storage, processing, and security.
- This includes protecting sensitive customer information, maintaining backups, implementing cybersecurity measures, and ensuring compliance with relevant data protection laws and regulations.
- Furthermore, Regulation 31 emphasizes the significance of effective risk management systems within insurance brokerage firms. Brokers must identify, assess, and manage risks associated with their operations to protect the interests of policyholders. This includes implementing risk mitigation

strategies, monitoring risk exposure, and establishing contingency plans to minimize potential disruptions to their business.

- Compliance is another critical aspect addressed by Regulation 31. Insurance brokers must establish mechanisms to ensure compliance with relevant laws, regulations, and codes of conduct.
- The requirement for insurance brokers to have adequate internal systems serves multiple purposes. It not only helps protect the interests of policyholders but also contributes to the overall stability and integrity of the insurance industry.
- By maintaining robust internal systems, insurance brokers can enhance their operational efficiency, minimize risks, improve customer service, and demonstrate their commitment to regulatory compliance.

Let's Sum Up

The ombudsman is supposed to receive and investigate complaints against government departments and public offices.

The institution of insurance ombudsman in India was established through the Governing Body of Insurance Council (GBIC) under the Redressal of Public Grievances Rules 1998. Subsequently, the insurance ombudsman was set up after the government of India passed a notification dated 11th November, 1998.

The insurance ombudsman is set up for quick disposal of the grievances of the insured customers and to resolve their grievances. It is also responsible for building policyholders' confidence in the system.

'Insurance Ombudsman' is an institution to resolve all complaints relating to the settlement of claims by insurance companies in a cost-effective, efficient and fair manner.

When an insurer does not satisfy the complaints of an aggrieved person, the aggrieved person himself or through his legal heir may approach the Ombudsman for the insured with a written complaint addressed to the Ombudsman within whose jurisdiction the branch of the insurer.

The GBIC issues orders of appointment of the insurance ombudsman on the basis of the recommendations of a committee.

CHECK YOUR PROGRESS – QUIZ - 16

1. What role does the Insurance Ombudsman play in the insurance industry?
   a. Marketing new policies
   b. Resolving disputes between insurers and policyholders
   c. Maximizing profits for insurance companies
   d. Delaying claim settlements
2. Who appoints the Insurance Ombudsman?
   a. Insurance companies
   b. Policyholders
   c. Insurance Regulatory and Development Authority of India (IRDAI)
   d. Government of India
3. What is the primary purpose of the Insurance Regulatory and Development Authority of India (IRDAI)?
   a. To minimize consumer protection
   b. To maximize insurer profits
   c. To regulate and supervise the insurance industry
   d. To discourage insurance agents
4. Which entity is responsible for enforcing regulations and guidelines in the insurance sector?
   a. Insurance Ombudsman
   b. Insurance agents
   c. Insurance companies
   d. Insurance Regulatory and Development Authority of India (IRDAI)
5. Which of the following is the predecessor of the IRDA act, 1999 ?
   a. The insurance Act 1938
   b. The life insurance corporation act 1956
   c. the marine insurance act 1963
   d. The publish liability insurance act, 1991

Answers :

1. b. Resolving disputes between insurers and policyholders
2. d. Government of India
3. c. To regulate and supervise the insurance industry
4. d. Insurance Regulatory and Development Authority of India (IRDAI)
5. a. the insurance act 1938

UNIT SUMMARY

Customer service in the insurance industry is a critical factor that directly impacts customer satisfaction, loyalty, and retention. As insurance products often deal with life, health, property, and financial security, exceptional service is essential to fostering trust and confidence between insurers and policyholders. The scope of customer service in insurance includes guiding customers through policy selection, explaining complex terms and conditions, answering queries, providing support during claims processing, and assisting with policy renewals or modifications.

Given the complex and often sensitive nature of insurance products, customers expect transparent, efficient, and empathetic service, especially during critical moments like claims settlement. The quality of customer support during such times can significantly influence a customer's perception of the insurer and their likelihood to continue or recommend the service.

The rise of digitalization in the insurance sector has led to an evolution in customer service expectations. Today's customers demand quick, accessible, and personalized interactions. As a result, insurers are increasingly adopting digital tools such as artificial intelligence (AI), chatbots, mobile apps, and online portals to automate processes and offer 24/7 support. These technologies help streamline services like policy purchase, claims filing, and issue resolution, making customer interactions faster and more convenient.

However, while technology enhances service delivery, the human element remains critical. Personalized attention, empathy, and understanding are especially important when handling claims or complex issues. Insurers must strike a balance between automation and human engagement to provide both efficiency and emotional support.

In conclusion, effective customer service is essential for building trust and long-term relationships in the insurance industry. By focusing on both technological innovation and personalized customer care, insurers can not only meet but exceed customer expectations, enhancing satisfaction, increasing retention, and differentiating themselves in a competitive market. This ultimately leads to improved business performance and sustainability.

SELF ASSESSMENT QUESTIONS

1. Discuss the importance of customer service in the insurance industry. How does it influence customer satisfaction and retention?
2. How has digital transformation reshaped customer service in the insurance industry? Analyze the role of AI, chatbots, and online platforms in improving customer interactions.
3. Examine the challenges faced by insurers in delivering consistent customer service across various channels (phone, email, in-person, and digital platforms).
4. How does customer service during the claims process impact the overall perception of an insurance company? Discuss the importance of empathy and efficiency in claims handling.
5. What are the key differences between customer service in life insurance and general (non-life) insurance? How should insurers tailor their service approach to meet the needs of each segment?
6. Discuss the role of customer feedback in improving insurance services. How can insurers effectively use feedback to enhance their customer service experience?
7. How can insurers balance automation and personalized service in customer interactions? Discuss the importance of human touch in an increasingly digital insurance environment.
8. Analyze the impact of regulatory requirements on customer service in insurance. How do laws and regulations shape service standards and customer rights?
9. How can customer service in the insurance industry be improved to better serve underinsured or financially underserved populations?
10. What are the emerging trends in customer service in the insurance industry? How are insurers adapting to changing consumer preferences and expectations?

REFERENCES AND SUGGESTED READINGS

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UNIT V: RISK MANAGEMENT

Risk Management and Control in banking and insurance industries – Methods of Risk Management – Risk Management by Individuals and Corporations – Tools for Controlling Risk.

RISK MANAGEMENT

UNIT OBJECTIVES

Risk management in insurance is the systematic process of identifying, assessing, and mitigating potential risks that policyholders and insurers face. It lies at the heart of the insurance industry, where insurers take on the financial burden of risk in exchange for premiums. The primary goal of risk management in insurance is to minimize the financial impact of unforeseen events, such as accidents, natural disasters, illnesses, or other losses, ensuring both the stability of the insurer and the protection of the insured.

For insurers, risk management involves careful underwriting, where they evaluate the likelihood of a claim based on various risk factors, such as age, health, occupation, or property value. This assessment helps determine the appropriate premium to charge for coverage. Insurers also diversify their risk portfolios and invest

in reinsurance, transferring part of the risk to other companies to safeguard against large-scale losses.

For policyholders, insurance itself is a form of risk management, providing financial protection against unexpected events. Through insurance, individuals and businesses can manage their exposure to potentially ruinous financial consequences, transferring that risk to the insurer.

Overall, risk management in insurance is a critical function, ensuring financial stability and enabling both insurers and policyholders to manage uncertainty effectively.

SECTION 5.1: RISK MANAGEMENT IN BANKING

5.1.1 Risk Management in Banking

Banks have been responsible for the smooth functioning of economies for decades. However, the credit crisis, global recessions, the Covid-19 pandemic, and the more recent collapse of banks in the US and Singapore in 2023 have been major setbacks for the banking sector, and it is anticipated that by 2025, risk functions in banks will become more unpredictable. Unless banks act immediately and get ready for these longer-term changes, they will be swamped by new constraints and demands.

Banking risk management is the process of a bank identifying, evaluating, and taking steps to mitigate the chance of something bad happening from its operational or investment decisions. This is especially important in banking, as banks are responsible for creating and managing money for others.

Typically, risk teams separate fraud and compliance operations, resulting in separate teams for fraud risk management, responsible for managing risk associated with fraud operations, and compliance risk management, responsible for managing risk associated with compliance operations.

5.1.2 The Importance of Risk Management in Banking

Banks are cornerstone institutions of national and global financial systems. So while they are allowed to have some degree of risk, they are typically afforded much less risk than other industries. This is because if they fail, it slows or halts the

creation and exchange of money, which has far-reaching impacts on the rest of the economy.

Some specific reasons for the importance of risk management in the banking sector are that it helps banks to:

- Avoid wasting or needlessly losing the money they need to stay in business
- Avoid disruptions to their operations
- Maintain confidence from investors and customers to continue doing business with them
- Comply with laws and regulations to avoid paying non-compliance fines

The Risk Management Process: How It Works in Banking

The risk management process in banking typically involves six components:

- **Identification:** Defining the nature of risks, including where they originate from and why they pose a threat to the bank.
- **Assessment and Analysis:** Evaluating how likely a risk will pose a threat to the bank, and how grave that threat will likely be. This helps a bank prioritize which risks deserve the most attention.
- **Mitigation:** Designing and implementing bank policies and processes that limit the chance that risks will become threats, and that minimize the damage threats may cause.
- **Monitoring:** Gathering data on threat prevention and incident response to determine how well a bank risk management strategy is working. This also involves researching emerging risk trends to determine if a bank‘s risk management framework needs (or will need) updating.
- **Cooperation:** Establishing relationships between risks and mitigation strategies across different areas of the bank‘s operations to create a more centralized and coordinated threat response system.
- **Reporting:** Documenting and reviewing information related to the bank‘s risk management efforts to gauge their effectiveness. This is also used to track how the bank‘s overall risk profile changes over time.

These components need to be carried out together—and repeated regularly—in order to give banks as much protection against risk as possible.

5.1.3 Types of Risk Management in Banking

Bank risk management has a number of different threat areas to cover. The challenge isn‘t just how many different types of risk there are though, it‘s also about how much control an organization actually has over these factors.

To help organizations navigate the different types of risk management areas to analyze, we‘ll explore each in detail below.

1. Credit Risk

Credit risk is one of the most common types of risk for banks. Put simply, it‘s the risk of a bank lending money to a customer and not having it paid back. This can decrease the amount of assets a bank has available to meet its financial obligations. It can also cost the bank extra money if it deploys methods of trying to recoup the money it‘s owed.

Mitigating credit risk boils down to knowing two things. First is the bank‘s overall financial position, in terms of how much in losses it can take while still being able to operate effectively. Second is knowing a specific customer understanding their financial history and situation, as well as their general financial behavior, to evaluate the amount of risk they pose of defaulting on a loan. A bank can then tailor a customer‘s lending agreement to have tighter or looser terms, depending on their level of risk.

2. Market Risk

Also known as systematic risk, market risk is the chance that an adverse event outside the banking industry itself will negatively affect a bank‘s investments. This could be from an issue in a single industry—such as the US housing market collapse in 2008—or from a general national or international economic downturn. Other types of crises, such as political instability or natural disasters, can also increase market risk.

In some cases, market risk can be mitigated by diversifying a bank‘s investment portfolio. However, there are other times where this strategy won‘t work

because a crisis will affect multiple interdependent industries. Some other tactics that can work include investing in staple industries (such as utilities or consumer packaged goods), employing a long-term investing strategy, or keeping more of a bank‘s assets in liquid form.

3. Operational Risk

Operational risk refers to risks incurred based on how a bank is run from day to day. For example, if employees are poorly trained, they may make more errors that cost the bank time and money to correct. Or if the bank has an inadequate IT infrastructure, its systems may break down, disrupting services to customers.

A component of operational risk is cybersecurity risk. This is how likely cybercriminals are to successfully attack a bank‘s digital systems. The resulting theft or destruction of digital money or sensitive information can significantly hinder a bank‘s ability to operate effectively. It can also put customers and stakeholders at risk.

Operational risk can be limited in a few ways. One is to hire the right people and properly train them on both the bank‘s processes and its ethical culture. Another is to secure the bank‘s tech stack, including thoroughly vetting third-party service providers, as well as staying up-to-date with cybersecurity threats and trends.

Automating processes with technology—such as customer onboarding can help reduce human error. Implementing feedback and data collection programs can help address any updates needed as the bank‘s risk profile changes over time.

4. Reputational Risk

Reputational risk refers to the risk that a bank will lose confidence from its investors and customers, and thus lose funding or business (respectively). It‘s basically a side effect of any other risk a bank encounters, but that doesn‘t mean it‘s any less threatening. It can be caused directly by the bank‘s business practices or employee conduct, or indirectly by the bank being associated with a person or group that has a negative reputation.

For example, reputational risk might result from a client receiving poor customer service from the bank and then telling others about it—either through word

of mouth or on social media. Or a news outlet may publish a story revealing corruption among some of a bank‘s management staff.

Minimizing reputational risk starts with defining the bank‘s core ethical values. Develop these in concert with stakeholders, and conduct proper training on them so employees understand how they are expected to conduct themselves. A bank should also research its reputation in news outlets and on social media, addressing concerns and taking responsibility for mistakes whenever appropriate. Reputation management software can help with this.

The bank should also develop a contingency plan in case a reputation-affecting incident occurs. It should focus on quick and transparent communication, outlining what controls are being used to help minimize the damage, as well as how the bank will determine what it will do differently in the future to avoid the same mistake happening again. A bank may want to hire a public relations firm, or use specialized reputation management software, to assist with this and other reputational risk management processes.

5. Liquidity Risk

Liquidity risk refers to the chance that a bank will run out of physical money, including if it can‘t convert its other assets into cash fast enough. Thus, it becomes unable to meet its short-term obligations to creditors or customers.

In recent trend that threatens to elevate banks‘ liquidity risk is an increase in the number of bank runs. A bank run happens when rumors that a bank may fail in the near future cause its customers to panic. They then try to withdraw as much cash as possible from the bank before they potentially lose access to their money.

Bank runs rapidly decrease the amount of liquid assets a bank has available to meet its short-term debts. So while rumors of the bank failing may not have been completely accurate, the bank run still causes a spike in the bank‘s liquidity risk. This makes it much more likely that the bank actually will fail.

Especially if they result in bank failures in this way, bank runs can also damage overall consumer confidence in the entire financial system. This can lead to

a domino effect of further bank runs, and potentially more bank failures as a consequence.

To make matters worse, with the advent of the internet, bank runs are becoming more threatening than ever. Rumors of a bank‘s financial troubles can spread very quickly over online communications, especially social networks. And the ability to make electronic funds transfers means that customers can withdraw money almost instantaneously without actually setting foot in a bank, making it difficult for the bank to control how fast it‘s drained of available cash.

Banks can manage their liquidity risk by more regularly forecasting their cash flow—that is, how fast liquid assets are coming into a bank versus leaving it. Part of this is understanding the potential risks associated with the different ways a bank is funded, from investing to customers. A bank should also have a contingency funding plan (CFP) in place to address liquidity shortfalls.

Banks can also conduct stress tests—creating hypothetical risk scenarios that would cause a loss of liquidity, and estimating how much liquidity would be lost in each instance. This can allow a bank to create baseline liquidity rates, helping to ensure it has enough working capital in the event of a crisis.

6. Compliance Risk

Bank compliance risk involves the risks a bank takes by not fully complying with applicable government laws or industry regulations. These can include punitive fines, civil lawsuits, criminal charges, and even economic sanctioning.

Compliance risk includes a component of reputational risk, as well. Banks exposed as being non-compliant often lose the trust of their investors and customers, which hurts their ability to make money. They can also cause a downturn in overall consumer and investor trust in the entire banking industry or financial system.

A bank can manage compliance risk by having employees on staff familiar with applicable laws and regulations—for most organizations, this is an AML compliance officer. It‘s also essential to equip them with the right tools to automate

processes where possible, quantify and analyze activity patterns, and keep on top of any other obligations.

One of these obligations should be to understand the other types of risks that a bank faces, as well as assess how likely they are and how impactful they would be. This allows a bank to identify areas of residual risk where it may not entirely be meeting compliance requirements, and strengthen controls there.

Finally, a bank should make compliance part of its overall culture. This means educating employees outside of the compliance and risk management teams on what laws and regulations the bank has to comply with, and why they can play important roles in ensuring this happens. It can also mean proactively addressing reputational risk. A bank can do this by summarizing what it‘s doing (in a practical sense) to remain compliant, and how that protects the interests of customers and other stakeholders.

5.1.4 Risk Management by Individuals

Risk management for individuals is a key element of life-cycle finance, which recognizes that as investors age, the fundamental nature of their total wealth evolves, as do the risks that they face. *Life-cycle finance* is concerned with helping investors achieve their goals, including an adequate retirement income, by taking a holistic view of the individual‘s financial situation as he or she moves through life.

Individuals are exposed to a range of risks over their lives: They may become disabled, suffer a prolonged illness, die prematurely, or outlive their resources. In addition, from an investment perspective, the assets of individuals could decline in value or provide an inadequate return in relation to financial needs and aspirations. All of these risks have two things in common: They are typically random, and they can result in financial hardship without an appropriate risk management strategy. Risk management for individuals is distinct from risk management for corporations given the distinctive characteristics of households, which include the finite and unknown lifespan of individuals, the frequent preference for stable spending among individuals, and the desire to pass on wealth to heirs (i.e., through bequests). To protect against unexpected financial hardships, risks must be identified, market and non-market solutions considered, and a plan developed and implemented. A well-constructed plan for risk management will involve the selection of financial products

and investment strategies that fit an individual‘s financial goals and mitigate the risk of shortfalls.

In this reading, we provide an overview of the potential risks to an individual or household, an analysis of products and strategies that can protect against some of these risks, and a discussion regarding the selection of an appropriate product or strategy. Following the introduction, Section 2 provides an overview of human and financial capital. Section 3 addresses the process of risk management, the financial stages of life for an individual, the economic (or holistic) balance sheet, and individual risks and risk exposures. Section 4 discusses the types of products relevant to financial planning, including insurance and annuities. Section 5 contains an insurance program case study and insights on implementing risk management solutions for individuals. Section 6 summarizes the key points of the reading.

Key concepts related to risk management and individuals include the following:

- The two primary asset types for most individuals can be described broadly as human capital and financial capital. Human capital is the net present value of the individual‘s future expected labor income, whereas financial capital consists of assets currently owned by the individual and can include such items as a bank account, individual securities, pooled funds, a retirement account, and a home.
- Economic net worth is an extension of traditional balance sheet net worth that includes claims to future assets that can be used for consumption, such as human capital, as well as the present value of pension benefits.
- There are typically four key steps in the risk management process for individuals: Specify the objective, identify risks, evaluate risks and select appropriate methods to manage the risks, and monitor outcomes and risk exposures and make appropriate adjustments in methods.
- The financial stages of life for adults can be categorized in the following seven periods: education phase, early career, career development, peak accumulation, pre-retirement, early retirement, and late retirement.
- The primary goal of an economic (holistic) balance sheet is to arrive at an accurate depiction of an individual‘s overall financial health by accounting for the present value of all available marketable and non-marketable assets, as well as all liabilities. An economic (holistic) balance sheet includes traditional assets and

liabilities, as well as human capital and pension value, as assets and includes consumption and bequests as liabilities.

- The total economic wealth of an individual changes throughout his or her lifetime, as do the underlying assets that make up that wealth. The total economic wealth of younger individuals is typically dominated by the value of their human capital. As individuals age, earnings will accumulate, increasing financial capital.
- Earnings risk refers to the risks associated with the earnings potential of an individual—that is, events that could negatively affect someone‘s human and financial capital.
- Premature death risk relates to the death of an individual, such as a family member, whose future earnings (human capital) were expected to help pay for the financial needs and aspirations of the family.
- Longevity risk is the risk of reaching an age at which one‘s income and financial assets are insufficient to provide adequate support.
- Property risk relates to the possibility that one‘s property may be damaged, destroyed, stolen, or lost. There are different types of property insurance, depending on the asset, such as automobile insurance and homeowner‘s insurance.
- Liability risk refers to the possibility that an individual or other entity may be held legally liable for the financial costs of property damage or physical injury.
- Health risk refers to the risks and implications associated with illness or injury. Health risks manifest themselves in different ways over the life cycle and can have significant implications for human capital.
- The primary purpose of life insurance is to help replace the economic value of an individual to a family or a business in the event of that individual‘s death. The family‘s need for life insurance is related to the potential loss associated with the future earnings power of that individual.
- The two main types of life insurance are temporary and permanent. Temporary life insurance, or term life insurance, provides insurance for a certain period of time specified at purchase, whereas permanent insurance, or whole life insurance, is used to provide lifetime coverage, assuming the premiums are paid over the entire period.
- Fixed annuities provide a benefit that is fixed (or known) for life, whereas variable annuities have a benefit that can change over time and that is generally based on the performance of some underlying portfolio or investment. When

selecting between fixed and variable annuities, there are a number of important considerations, such as the volatility of the benefit, flexibility, future market expectations, fees, and inflation concerns.

- Among the factors that would likely increase demand for an annuity are the following: longer-than-average life expectancy, greater preference for lifetime income, less concern for leaving money to heirs, more conservative investing preferences, and lower guaranteed income from other sources (such as pensions).
- Techniques for managing a risk include risk avoidance, risk reduction, risk transfer, and risk retention. The most appropriate choice among these techniques often is related to consideration of the frequency and severity of losses associated with the risk.
- The decision to retain risk or buy insurance is determined by a household‘s risk tolerance. At the same level of wealth, a more risk-tolerant household will prefer to retain more risk, either through higher insurance deductibles or by simply not buying insurance, than will a less risk-tolerant household. Insurance products that have a higher load will encourage a household to retain more risk.
- An individual‘s total economic wealth affects portfolio construction through asset allocation, which includes the overall allocation to risky assets, as well as the underlying asset classes, such as stocks and bonds, selected by the individual.
- Investment risk, property risk, and human capital risk can be either idiosyncratic or systematic. Examples of idiosyncratic risks include the risks of a specific occupation, the risk of living a very long life or experiencing a long-term illness, and the risk of premature death or loss of property. Systematic risks affect all households.

Best Practices for Banking Risk Management

In addition to the tips above for managing specific types of banking risks, there are certain things a bank can do to have an overall more effective risk management program. Here are some examples.

Establish an institution-wide risk governance framework

This is another way of saying that it‘s important to involve everyone who works at the bank—not just risk and compliance team employees—in the bank‘s risk

management operations. Department leaders should brainstorm with their teams, and then collaborate with executives, to develop an overall risk profile for the bank. This should be shared among all bank stakeholders so they understand what risks a bank faces and why it‘s important to control them.

The identified risks should then be delegated to the appropriate departments. Team leaders should work to develop risk management strategies, and ensure that they‘re properly understood and implemented, within each department. Decentralizing risk management like this helps to make it an institution-wide priority while limiting confusion over risk management roles in banking.

Prioritize identity verification & authentication for everyone who interacts with the bank People not dealing honestly with a bank can drastically increase the risks it faces. That‘s why a bank should make a point of investing in identity verification and authentication techniques for both customers—whether individuals or businesses—and its own employees. These are especially important during onboarding (whether gaining new clients or hiring new staff), but they should be applied regularly afterwards to ensure everyone is acting in their own capacity.

Know your customer helps to ensure individuals aren‘t impersonating others to cheat the system, or acting unlawfully to another party‘s benefit. Know Your Business (KYB) is essential for knowing who‘s really in charge of a business, and making sure the business itself is legitimate (and not, say, a shell company used simply to hide illicit dealings). And Know Your Employee (KYE) is important for ensuring all bank employees are acting in the bank‘s best interests, as many risks can be caused by employees misusing privileged information—including sharing it with illegitimate outside parties.

Automate tasks related to risk management, like transaction monitoring Checking transactions to see if they pose a threat to a bank or its stakeholders is a tedious—if not impractical—process to do manually. Not only does this cost extra time and money, but it can also actually introduce more risk in the form of human error. The key is to balance between being able to catch transactions (or patterns of them) that are likely risky, and filtering out false positives that unnecessarily take up a risk management team‘s time.

Transaction Monitoring solution helps with this in two ways. First, it looks beyond strictly monetary data streams to other activities that may be deemed suspicious. This allows banks to create more complete and accurate risk profiles for customers and transactions.

Second, it employs machine learning in banking risk management to create —alert scores These are ratings based on a customer‘s transaction history, the bank‘s case history, and other factors that indicate how likely a suspicious activity alert will be a true positive. This allows a bank‘s risk management team to better prioritize which alerts actually warrant a manual investigation.

Keep up with both individual cases and overall risk reporting

When incidents happen that present heightened risk to the bank, it‘s important to not try and deal with them as a single group. Compartmentalize them based on the relevant information, and then delegate them to separate teams or team members. This allows for handling more incidents at once, while still allowing each team to have greater focus on data analysis and pattern visualization for each incident. This is a strategy known as case management.

With that said, it‘s also helpful to write and file reports regarding incidents on a fairly regular basis.This serves two purposes. First, it reduces compliance risk by demonstrating what practical steps the bank is taking to address risk. Second, when taken together, these reports help paint a picture of a bank‘s overall risk management profile—where it faces the most (and least) risk, and how effective its controls are in mitigating certain types of risk.

Continually access, analyze, and act on risk metrics

Risk management in the banking sector—or anywhere else, for that matter—isn‘t a static process. A bank‘s staff or clientele can grow and change. New technological standards get developed, which can lead to both better security **and** new avenues for risk. And new regulatory requirements are put in place to address the evolving landscape of threats to banks.

That‘s why the risk management process in the banking sector has to be dynamic. Banks need to assess how well their current controls are handling risk, and

what areas of risk may need further attention. They also need to look at what risks they may face in the near future, and determine if their systems are capable of adapting to properly manage those risks.

Above all, though, a bank has to take action—creating and updating risk management plans based on its analysis and implementing governance structures to ensure all employees are on board and doing their part.

The steps of Risk Management Process in Banking

The risk management process in banking typically involves the following steps:

- **Risk Identification:**

Risk identification involves a comprehensive analysis to identify and understand the various types of risks that a bank may encounter. These risks can include credit risk, market risk, operational risk, liquidity risk, compliance risk, and strategic risk. By conducting thorough risk assessments, banks gain insights into potential threats to their financial stability and operational resilience.

- **Risk Assessment**:

In risk assessment, banks evaluate the potential impact and likelihood of each identified risk. This evaluation involves both quantitative and qualitative methods. Quantitative methods use statistical models to quantify risks in terms of potential financial losses, while qualitative assessments consider broader factors such as regulatory changes, market conditions, and emerging threats.

- **Risk Measurement:**

Quantifying the potential impact of risks in financial terms is critical for effective risk management. By measuring risks, banks can prioritize their responses and allocate resources accordingly. This measurement facilitates better decision-making, allowing banks to strategically manage their risk exposure and optimize their risk-return profile.

- **Risk Mitigation:**

Risk mitigation strategies are implemented to reduce or control risks. These strategies can include diversification of assets, setting risk limits for various activities,

employing hedging techniques, and using financial instruments like derivatives to manage specific risks. By diversifying their portfolios and employing effective risk management tools, banks aim to minimize potential losses and protect their capital base.

- **Monitoring and Reporting:**

Continuous monitoring of the bank's risk profile is essential for proactive risk management. Banks regularly assess the effectiveness of risk mitigation strategies and adjust their approach based on changing market conditions or emerging risks. Reporting on risk management activities is crucial for stakeholders, providing transparency and accountability regarding the bank's risk exposure and risk management practices.

- **Governance and Compliance:**

Banks must ensure compliance with relevant regulations and internal policies to mitigate legal and reputational risks. Strong governance frameworks encompass risk oversight, internal controls, and risk culture, fostering a risk-aware organizational culture and promoting accountability at all levels of the institution.

Managing Risk Is Important For Banks

It is important for banks to efficiently and proactively manage various risks they face to safeguard banking operations, reputation, and customer assets amidst intensifying stakeholder expectations. Below are five reasons explaining why risk management is crucial for banks:

- **Ensuring Financial Stability:**

Banks operate in a dynamic environment where economic factors, market trends, and policies constantly change. These fluctuations can have significant impacts on a bank's operations. Effective risk management ensures that banks remain stable and solvent by identifying, assessing, and mitigating potential risks before they can escalate into serious issues.

- **Facilitating Efficient Capital Allocation**:

Risk management helps banks allocate capital efficiently by identifying areas where risks are most significant. This ensures that resources are directed to areas that offer optimal returns while managing exposure to potential losses.

- **Trust and Reputation:**

In the banking industry, trust is a currency as valuable as any financial asset. Effective risk management helps in building and maintaining trust among customers, investors, and other stakeholders.

- **Optimizing Returns:**

By carefully managing risks, banks can optimize their return on investments. It involves a calculated approach towards risk-taking, where the potential returns are weighed against the possible risks. Such a balanced strategy prevents banks from making reckless decisions that might promise high returns but could lead to significant losses, ensuring that the bank‘s assets are invested wisely.

- **Long-term Growth and Sustainability:**

A robust risk management framework allows banks to make informed decisions, optimize their risk-return profile, and invest in growth opportunities with a clear understanding of the potential risks. It positions the bank as a stable and reliable entity, attractive to investors and partners.

Major Challenges in Banks While Managing Risk

Risk management in banking faces notable hurdles, such as cybersecurity threats in today's digital age where safeguarding financial data is crucial. Banks also grapple with evolving regulations and must navigate varied global markets, each with distinct risk profiles and rules.

The rise of complex financial products presents growth opportunities but requires specialized risk expertise. Balancing profit goals with careful risk assessment amid economic and political changes remains a key challenge in managing credit risk.

Despite the clear importance of risk management, banks face numerous challenges in this area, some of which are outlined below:

- **Cybersecurity Threats:**

As banks increasingly digitalize their operations, cybersecurity emerges as a significant risk. Protecting sensitive financial information against hackers and breaches is a continuous challenge due to the sophisticated and evolving nature of cyber threats. Balancing security measures with user convenience adds another layer of complexity.

- **Regulatory Changes:**

The regulatory environment for banks is in a state of flux, with new laws and amendments often coming into force. Keeping abreast of these changes and ensuring compliance can be daunting, requiring constant vigilance and adaptation. The global nature of banking adds another degree of complexity, as institutions must navigate a patchwork of international, national, and local regulations.

- **Complex Financial Products:**

The innovation of complex financial products offers banks new avenues for growth but also presents new risk management challenges. Understanding the intricate workings of these products, assessing their risk profile, and managing these risks effectively demand specialized knowledge and skills. Banks must invest in training and development to equip their teams to handle these complexities efficiently.

- **Globalization of Financial Markets:**

As banks expand their operations globally, they are exposed to new markets with varying risk profiles, including different regulatory regimes, political instability, and economic volatility. Managing these diverse and often unfamiliar risks requires a nuanced understanding of local markets and international risk management standards. The challenge is to maintain a consistent risk management approach while adapting to local conditions and regulations.

- ## Credit Risk Management:

Assessing the creditworthiness of borrowers and setting appropriate interest rates pose ongoing challenges. Economic downturns, shifts in the market, or unforeseen circumstances affecting borrowers can significantly impact a bank's loan portfolio. Balancing the pursuit of profitability with prudent risk assessment is a delicate endeavor. Banking Risk Management - Best Practices

Below are some practices banks can undertake to stay ahead of unforeseen risks:

- ## Integrated Risk Management Framework:

Implementing an integrated framework that consolidates various risk types (e.g., credit, market, operational, compliance) into a single, unified system enables banks to view their risk profile holistically. This approach facilitates better decision-making, as it provides a complete picture of how different risks interrelate and impact the overall business.

- ## Dynamic Risk Appetite:

A clearly defined risk appetite is crucial, outlining the level and type of risk the bank is willing to accept in pursuit of its strategic objectives. This appetite should be dynamic, and adaptable to changes in the bank's environment and objectives.

By doing so, banks can ensure that they are not taking on risks that exceed their capacity or are misaligned with their strategic goals.

- ## Forward-looking Stress Testing:

Stress testing allows banks to anticipate how certain hypothetical adverse scenarios would affect their financial health. By simulating extreme but plausible conditions (e.g., economic downturns, market crashes), banks can assess the resilience of their portfolios and adjust their risk mitigation strategies accordingly. Regular stress testing, tailored to the bank's specific risk profile and market conditions, is essential for proactive risk management.

- **Cultivating a Risk-aware Culture:**

A risk-aware culture, championed by senior leadership and ingrained across all levels of the organization, is crucial for effective risk management. Training programs, performance incentives, and communication strategies should all emphasize the importance of risk awareness and personal accountability in risk decisions.

Let's Sum Up

Banking risk management is the process of a bank identifying, evaluating, and taking steps to mitigate the chance of something bad happening from its operational or investment decisions.

Banks are cornerstone institutions of national and global financial systems. So while they are allowed to have some degree of risk, they are typically afforded much less risk than other industries.

Credit risk is one of the most common types of risk for banks. Put simply, it‘s the risk of a bank lending money to a customer and not having it paid back. This can decrease the amount of assets a bank has available to meet its financial obligations.

Also known as systematic risk, market risk is the chance that an adverse event outside the banking industry itself will negatively affect a bank‘s investments.

Operational risk refers to risks incurred based on how a bank is run from day to day. For example, if employees are poorly trained, they may make more errors that cost the bank time and money to correct.

Reputational risk refers to the risk that a bank will lose confidence from its investors and customers, and thus lose funding or business (respectively). It‘s basically a side effect of any other risk a bank encounters, but that doesn‘t mean it‘s any less threatening.

Liquidity risk refers to the chance that a bank will run out of physical money, including if it can‘t convert its other assets into cash fast enough. Thus, it becomes unable to meet its short-term obligations to creditors or customers.

Risk identification involves a comprehensive analysis to identify and understand the various types of risks that a bank may encounter. These risks can include credit risk, market risk, operational risk, liquidity risk, compliance risk, and strategic risk.

In risk assessment, banks evaluate the potential impact and likelihood of each identified risk.

CHECK YOUR PROGRESS - QUIZ - 17

1. What is the primary objective of risk management in the banking and insurance industries?

a. Maximizing profits

b. Minimizing risks

c. Increasing market share

d. Expanding operations

2. Which of the following is a method of risk management commonly used in banking and insurance?

a. Risk avoidance

b. Risk celebration

c. Risk amplification

d. Risk procrastination

3. What is the role of individuals and corporations in risk management in the banking and insurance sectors?

a. They have no role in risk management

b. They solely rely on government regulations

c. They actively participate in identifying and managing risks

d. They delegate all risk management tasks to external consultants.

4. Which of the following is a tool commonly used for controlling risks in banking and insurance?

a. Spreading rumors

b. Ignoring risks

c. Diversification

d. Blaming others

5. When a bank borrower, or counter party, fails to meet its payment obligations regarding the terms agreed with the bank, it is called

a. Market risk

b. Operational risk

c. Liquidity risk

d. Credit risk

Answers :

1. b. Minimizing risks
2. a. Risk avoidance
3. c. They actively participate in identifying and managing risks
4. c. Diversification
5. d. Credit risk

SECTION 5.2: INSURANCE RISK MANAGEMENT

5.2.1 Insurance Risk Management

Alignment of the pricing market strategy and reinsurance arrangements to the organisation's risk appetite as well as optimising the goals of the organisation. Assist clients to recognise risk events and changes to claim rates earlier, so as to move towards a more market responsive, risk-based pricing approach which ensures the efficient deployment of capital and a reduction in extreme risk event losses.Enhance the feedback mechanism from claims function to underwriting and product development processes to improve the performance and profitability of these processes.

How Can Insurance Companies Benefit from Risk Management?

According to a study by the National Association of Insurance Commissioners (NAIC), core risks in the insurance business include —underwriting, credit, market, operational, liquidity risks, etc.‖ Given this wide variety of concerns, there is a tremendous opportunity for risk management in insurance companies to make a positive impact.

To return to the customer service example above, let‘s look at how enterprise risk management could help:

- Risk management involves identifying, assessing, and mitigating risk. The beauty of a well-implemented risk management program is that it‘s built on a foundation of standardized risk assessments to help companies prioritize their

risk based on its potential impact. Naturally, this process will surface risks that will impact the business‘s core competencies.

- For an insurance company, customer service would inevitably come to the forefront of a risk assessment. To address this risk, the insurance company could take steps to integrate incident management and risk management. Most companies have a way to track incidents like customer complaints, but many do not have a way of categorizing, prioritizing, and escalating incidents across teams. Risk management in the risk insurance business helps centralize and identify trends in customer feedback.
- From there, insurance companies can implement controls to address those trends, such as hiring more customer service reps to resolve long wait times or implementing call screenings to identify less-than-helpful interactions.

5.2.2 How Does Insurance Reduce Risk?

The first inherent risk is the RISK of LIFE - as life is uncertain. However, you need not worry about finance while dealing with these risks. With a solid life insurance policy, you can live a stress-free life. They can also choose a suitable health insurance policy that safeguards their family in case of medical requirements. This way, insurance provides an additional layer of financial security.

The second is the RISK of HEALTH - Good health is key to a happy life. The COVID-19 pandemic has demonstrated the importance of good health as well as health insurance policy. A suitable health insurance policy will assist you in dealing with any health emergencies and medical treatments in the family and it will serve to adequately cover all medical costs.

A leading financial expert says, ***‗Life insurance is not an investment. It is a risk management tool to protect future income’***.

Check out how life insurance protects you financially amidst uncertainties:

- **Secures your family’s future:** If you are the sole earning member of your family, the first thing you should do is to save responsibly, identify your long term financial goals and buy life insurance cover that helps to safeguard your family‘s needs. Consider the difficulties your family would face in your

absence. The life insurance plan you invest in will ensure their financial well-being and support them through difficult situations.

- **Fulfilling financial goals:** Everyone has financial goals. What matters is the effort you are ready to make to achieve those goals. A series of small steps in the right direction can help you achieve your goals such as tracking inflation- related trends, investing wisely after assessing your goals and spending carefully. If your goal includes planning your retirement and generating a source of passive income, life insurance is the financial tool you need for retirement planning. Thus, you will not be forced to rely on others, and you can live independently in later years.

- **Encourages savings and investments:** Disciplined saving is key to financial planning. For those interested in exploring investment options, consider Unit Linked Insurance Plans. ULIPs offer the dual benefits of insurance and investment. One of the key features of ULIPs is they are market-linked instruments, and therefore, give returns in line with the market while minimizing risks. They effectively promote and ensure risk management.

We have been motivating our readers to save, invest, and grow their wealth through Future Generali Easy Investment Online Plan. This is a ULIP product that offers the following benefits:

1. **Provides Protection** - The plan provides a life cover along with added benefit of wealth creation
2. **Is flexible** - It offers the flexibility to meet unexpected expenses by allowing you to partially withdraw some money 5 years after buying the policy.
3. **A Systematic Investment Tool** - The plan promotes the habit of saving systematically over a long term through monthly/annual payment modes.
4. **Enhances Your Returns with Loyalty Additions** - You are rewarded with additional units during the last 5 years of your policy term. These additional units are added to your fund, provided all to-date premiums are paid.
5. **Gives You Control** - The plan gives you the option of switching funds so that you are always in complete control on your investments.

6. **Offers Tax Benefits** - The plan is eligible for tax benefits under Section 80C and Section 10(10D) of Income Tax Act 1961.

In a Nutshell

Risk management is crucial to avoid losses in life. Managing the risks associated with an individual‘s life is even more important, as no one wants their family to suffer in their absence. Future Generali India Life Insurance offers several plans to suit an investor‘s financial needs. Our experts have been helping customers for the past many years to reduce risks. As many believe, ***‘I don’t call it life insurance. I call it Love Insurance. We buy it because we want to leave a legacy for those we love.’*** Why are you still waiting? It is wise to secure your family‘s future

The Objectives of Risk Management

The objectives of risk management are to find out the risks that a business faces and mitigate them. This is done by identifying, measuring, monitoring and controlling the risks. The overall objective is to enhance the safety of the operations and capital of the business. Risk management reduces the harmful effects of the risks and saves companies from losses. These are the objectives:

Identify

The first objective of risk management is to identify the risks. Business operations have many variables that run them. Some variables are positive, while others may move negatively. These negative movements may become a risk for the company. As a primary objective, risk management needs to identify these risks. They need to collect information from different sources to identify the losses that the company may have.

Measure

The next objective is measuring the risks. Once the risks have been identified, it is important to find ways to measure the impacts those risks can have. ISO 31000 standard of risk management updates the risk register. The risk register is a document that is used to determine the possibility of the risks materialising and to quantify risk values in monetary terms. This will help to measure the potential

amount that can be lost through a risk. Measuring risk is important for business as it helps to pave the way to mitigate it.

Monitor

Once the risk has been identified and measured, the next objective is to monitor the risk continuously. Risks are not static, they keep fluctuating from time to time. Keeping an eye on the risk helps to understand its nature and as a result, develop a strategy to control it.

Control

The final objective is to control risk. Finding the best way to manage or control risk is the ultimate goal of risk management. The aforementioned value at risk is important since many risk management techniques that are accessible to businesses come at a cost. When determining whether a risk is worthwhile, an organisation must take into account if it can bear the expense of risk management. Transferring, tolerating, treating or terminating are the four ways in which risk can be managed.

- Risk is transferred through the use of contracts such as insurance contracts. This method is generally used for high-value, low-probability risks.
- Tolerating risks as a necessary aspect of conducting business is acceptable in some situations. In cases where the dangers have low probability and low value, this method is typically used.
- One approach to risk control is treating risks, which aims to protect a company from the risk. This is accomplished by modifying the company‘s internal mechanisms to stop the recognised risk from posing a problem in the future.
- In some circumstances, terminating the risk completely could be the best course of action, especially if the value at risk and the probability both are very high.

The Benefits of Risk Management

Effective risk management decreases the losses and increases the efficacy of the business operations. These are the benefits of implementing risk management strategies:

- The awareness about risks increases across all levels of organisation.

- Increased assurance in the aims and ambitions of the company when strategy takes risk into account.
- Regulation and internal compliance demands are more effectively and efficiently complied.
- Increased operational effectiveness by applying risk procedures and controls more consistently.
- Enhanced security and safety at work for both clients and staff.
- A market-based competitive differentiator.

5.2.3 The Challenges of Risk Management

Risks are unpredictable and fluctuate from time to time. These challenges may pose a hindrance in mitigating risks. These are the challenges faced:

1. Risk management programs are expensive. They require costly software and services. This may increase the expenses of the company.
2. Businesses will need to invest more time and money to comply with the rules of risk management.
3. It is difficult to analyse the severity of the risk and its treatment all the time.

   Sometimes it leads to risk analysis paralysis.

4. It is challenging to convince executives of the benefits of risk management when you are unable to provide them with concrete data.

5.2.4 Risk Management Strategies for Corporations

Outside of economics, there are five steps to take when first assessing the risk and deciding on the best solutions for mitigation:

1. **Identify the risk**

Risks can be internal or external, so include any events that could cause problems or benefits for the company.

2. **Analyze the risk**

Thoroughly analyze the potential effects each risk will have on consumer behavior, the company or any endeavors underway.

3. **Evaluate the risk**

Rank risks according to the likelihood of each outcome to see how severely a set risk could impact the company or its strategy.

4. **Treat the risk**

Look at ways to reduce the probability of a negative risk and increase the probability of positive risks, preparing preventative and contingency plans as needed.

5. **Monitor the risk**

Track variables and proposed possible threats, and calmly treat any problems that arise as your tracking system identifies changes.

Let's Sum Up

Alignment of the pricing market strategy and reinsurance arrangements to the organisation's risk appetite as well as optimising the goals of the organisation.

According to a study by the National Association of Insurance Commissioners (NAIC), core risks in the insurance business include —underwriting, credit, market, operational, liquidity risks, etc.‖

Risk management involves identifying, assessing, and mitigating risk. The beauty of a well-implemented risk management program is that it's built on a foundation of standardized risk assessments to help companies prioritize their risk based on its potential impact.

They can also choose a suitable health insurance policy that safeguards their family in case of medical requirements.

Risk management is crucial to avoid losses in life. Managing the risks associated with an individual‘s life is even more important, as no one wants their family to suffer in their absence.

The first objective of risk management is to identify the risks. Business operations have many variables that run them. Some variables are positive, while others may move negatively. These negative movements may become a risk for the company. As a primary objective, risk management needs to identify these risks.

CHECK YOUR PROGRESS – QUIZ - 18

1. Relative variation of actual loss from expected loss is called……
   a. Subjective risk
   b. Objective risk
   c. Actual loss
   d. Expected loss
2. Risk is measurable……
   a. Loss
   b. Profit
   c. Uncertainty
   d. None of the above
3. …. Refers to a situation where outcome is not certain
   a. Uncertainty
   b. Uncertainty
   c. Insurance
   d. None of the above
4. If any risk is concerned with financial loss, it is termed as……..
   a. Business risk
   b. Business loss
   c. Financial risk
   d. Insurable claim
5. Risk which can be measured using numerical scale are known as
   a. Quantifiable risk
   b. Static risk
   c. Dynamic risk

d. Speculative risk

Answers :

1. b. Objective risk
2. c. Uncertainty
3. a. Uncertainty
4. c. Financial risk
5. a. Quantifiable risk

SECTION 5.3: TOOLS FOR CONTROLLING RISK

5.3.1 Tools for Controlling Risk

Changes in project risks are inevitable. As a project progresses, the probability and impact of current risks change, new risks emerge, and residual risks may increase or decrease.

Risk Control Tools and Techniques

1. Risk reviews

Risk reviews involve the following activities:

- Identifying new risks
- Evaluating current risks
- Evaluating the risk management processes
- Closing risks

Risk reviews are often performed during weekly project meetings. The reviews may be performed for agile projects during a sprint or release planning.

2. Risk audit

Project teams may have defined risk responses. The question is——Are the responses effective?‖ Project managers facilitate risk audits to examine the risk responses' effectiveness and determine whether changes are required. The team also examines the processes to identify, evaluate, respond to, and monitor risks.

3. **Variance and trend analysis**

As with many control processes, we now look for variances between the schedule, cost baselines, and actual results. When the variances increase, there is increased uncertainty and risk. Watch the trends and respond before the situation gets out of hand.

4. **Technical performance measurement**

Imagine that you are working on a software development project, and the functional requirements have been developed. You‘ve planned to deliver functions at a point in time—at the end of the fourth sprint, at the end of phase 1, or at a milestone. The technical performance measurement is a measurement of technical accomplishments.

5. **Reserve analysis**

The contingency and management reserves are added to the project budget during the cost planning as needed. As risks occur, the reserves may decrease. Depending on how your organization handles reserves and your risk management plan, project managers may request more reserves when inadequate.

6. **Meetings**

Project managers should be deliberate risk managers. Engage your team members and appropriate stakeholders in meetings to facilitate the risk management processes. For these meetings, be sure to:

- Distribute an agenda with a clearly stated purpose
- Invite the appropriate team members and stakeholders
- Use appropriate tools and techniques
- Distribute meeting minutes containing decisions, action items, issues, and risks

Let's Sum Up

Changes in project risks are inevitable. As a project progresses, the probability and impact of current risks change, new risks emerge, and residual risks may increase or decrease.

Project managers facilitate risk audits to examine the risk responses' effectiveness and determine whether changes are required.

Imagine that you are working on a software development project, and the functional requirements have been developed. You've planned to deliver functions at a point in time—at the end of the fourth sprint, at the end of phase 1, or at a milestone.

The contingency and management reserves are added to the project budget during the cost planning as needed.

Project managers should be deliberate risk managers. Engage your team members and appropriate stakeholders in meetings to facilitate the risk management processes.

CHECK YOUR PROGRESS – QUIZ - 19

1. ____risk is defined as the relative variation of actual loss from expected loss.
   a) Subjective risk
   b) Pure loss
   c) Objective risk
   d) Expected risk

2. ____refers to the cause of the loss or the contingency that may cause a loss.
   a) Risk
   b) Peril
   c) Danger
   d) Hazards

3. The law of large numbers can be applied more easily to ____than speculative risk
   a) Pure Risk
   b) Objective Risk
   c) Acceptable Risk

d) Subjective Risk

4. Risk management is synonymous with Insurance management

a) True

b) False

5. ___insurance is the one where the loss is not due to physical damage but the result of dishonesty of employees as a result of physical damage.

a) Liability

b) Pecuniary

c) Motor

d) Personal

Answers :

1. c. Objective risk
2. b. Peril
3. a. pure risk
4. b. False
5. b. Pecuniary

UNIT SUMMARY

Risk management and control in the banking and insurance industries are vital processes that ensure financial stability, protect stakeholders, and safeguard against potential losses. Both sectors operate in environments where they are exposed to various risks, such as credit risk, market risk, operational risk, and liquidity risk in banking, and underwriting, market, and operational risks in insurance.

In banking, risk management focuses on monitoring and mitigating risks associated with loans, investments, and market fluctuations. Banks employ strategies such as credit assessments, stress testing, and capital adequacy requirements to manage exposure to defaults, financial crises, and liquidity shortages. Regulatory frameworks like Basel III set standards for risk control, requiring banks to maintain sufficient capital reserves to absorb shocks.

In the insurance sector, risk management revolves around assessing the likelihood of claims and pricing policies accordingly. Insurers use underwriting to evaluate risks and employ reinsurance to transfer large or catastrophic risks to other companies. They also diversify their investment portfolios to minimize market risks.

SELF ASSESSMENT QUESTIONS

1. Analyze the key differences and similarities in risk management practices between the banking and insurance industries. How do these sectors approach risk assessment and mitigation differently?
2. Discuss the impact of regulatory frameworks such as Basel III on risk management in the banking industry. How do these regulations influence capital adequacy and risk control measures?
3. Examine the role of technology in enhancing risk management and control in both banking and insurance sectors. How have advancements like big data, AI, and machine learning transformed risk assessment and mitigation?
4. Evaluate the effectiveness of stress testing and scenario analysis as tools for risk management in the banking industry. How do these techniques help in preparing for financial crises and ensuring stability?
5. Discuss the role of underwriting in managing risk in the insurance industry. How does effective underwriting contribute to minimizing losses and ensuring financial stability for insurers?
6. Analyze the impact of operational risk management on the overall performance and stability of banks and insurance companies. What strategies can organizations implement to mitigate operational risks?
7. Evaluate the role of reinsurance in managing risk for insurance companies. How does reinsurance help insurers handle large-scale or catastrophic risks and maintain financial stability?
8. Discuss the challenges and benefits of integrating risk management practices with strategic decision-making in banking and insurance industries. How can effective integration enhance organizational resilience?
9. Analyze the impact of emerging risks, such as cybersecurity threats and climate change, on risk management practices in banking and insurance. How are these industries adapting to new and evolving risks?
10. Evaluate the role of corporate governance in ensuring effective risk management in banking and insurance sectors. How do governance structures and practices influence risk management outcomes?

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