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Sum up of Activities

It gives me immense pleasure in presenting this Institute’s Newsletter for the year 2019-20. The Institute had imparted training to 1888 officials on various topics and skills during the year through 75 courses, including 22 additional courses conducted as per the instructions of Headquarters and based on the training needs of user offices.

The Institute had conducted five pan-India courses during the year including one each on its three Knowledge Centre (KC) Topics. 22 IA&AS officers attended six courses including the three pan-India courses on KC Topics. We had successfully conducted a course on “Goods and Services Tax” for the RAE candidates, outside our premises, at Thiruvananthapuram.

A new two-day course on ‘Accounting of Fixed Assets for DA Cadre’ was introduced during the year and was conducted twice during July 2019.

New courses on ‘Data Analytics using R’ and ‘Data Extraction and Analysis using PostgreSQL’ have been incorporated in the training calendar 2020-21 to enhance the capabilities of our trainees.

The Institute had updated the STM on “Accounting for Fixed Assets under cash
basis accounting” in July 2019. A case study on “Operation of Sand Quarries” developed by the Institute was disseminated by Headquarters in March 2020.

The Institute had hosted IMF’s South Asian Regional Training and Technical Assistance Centre (SARTTAC) course on “Government Finance Statistics (GFS) / Public Sector Debt Statistics (PSDS)” during April 2019.

Besides, the infrastructure facility of the Institute was provided to various sister offices for conducting workshops/conferences/in-house training programmes.

As per the Headquarters’ initiative to provide training to SAOs/AAOs in various competency enhancement courses in Indian Institutes of Managements, all the six core faculty members underwent such trainings during February and March 2020. This would definitely help them in enhancing their skills and professional standards in imparting their assigned roles and responsibilities.

I am sure that the Institute would continue to strive to provide need-based and quality training that could be amply reflected in the work of its trainees.

P Madhavi
Principal Director

Achievements during 2019-20

The details of training courses conducted during the year are as under:

<table>
<thead>
<tr>
<th>Type of course</th>
<th>No. of courses</th>
<th>No. of trainees</th>
<th>No. of training days</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>48</td>
<td>1233</td>
<td>196</td>
</tr>
<tr>
<td>IS</td>
<td>27</td>
<td>655</td>
<td>122</td>
</tr>
<tr>
<td>Total</td>
<td>75</td>
<td>1888</td>
<td>318</td>
</tr>
</tbody>
</table>

The training sessions were handled by experts in the respective subjects & topics and prominent amongst them include:

- Mr. Amitabh Datta, Adjunct Professor, National Institute of Financial Management, Faridabad
- Mr. M. Srinivasa Rao, Commissioner of Income Tax, Chennai
- Mr. V. Nandakumar, Joint Commissioner of Income Tax, Chennai
- Mr. V Thirunavukarasu, Chief Conservator of Forests, Tamil Nadu
- Mr. R Selvam, Chief Engineer (Retd.), PWD, Tamil Nadu
- Mr. S. Murali, GM(Finance), Chennai Metro Rail Limited
- Mr. P K Acharya, GM(Finance), Neyveli Lignite Corporation
- Mr. P. Raghunath, Vice Principal, RBI Staff College, Chennai
- Mr. M. Sathyakumar, CEO & Founder, Tycoon + Advisors, Chennai
- Dr. B. Srinivasan, IRAS, FA&CAO (Retd), Indian Railways
CAG’s visit - 04 March 2020

IMF’s (SARTTAC) course – April 2019

Annual RAC Meeting – 14 February 2020

Mid-Term RAC Meeting – 11 October 2019

Hindi Fortnight Celebrations – September 2019

International Yoga Day – June 2019
The rise and proliferation of newly developed technologies in recent years have led to the rise of different cybercrimes, posing a major threat to the individuals and the organizations. A few helpful tips to keep one’s identity, personal information and data secure are given below:

1. **Phishing Emails**
   - Never respond to requests for personal information via email. Banks and other establishments will never ask for personal information in an email.
   - Do not enter personal information in a pop-up screen.
   - Do not click on any links listed in an email message from unknown persons.
   - Marking phishing emails as spam in Gmail will make it more likely that Gmail will identify future messages as spam for you and others with NMU accounts.
   - Use anti-virus and anti-spyware software and update them regularly.

   **Tips to overcome Phishing Attacks**
   - ![Icon] Do not accept friends request from people you do not know
   - ![Icon] Do not open links or attachments if you suspect it is not from legitimate source
   - ![Icon] Safeguard your personal banking and credit card information from unknown recipients

2. **Disposal of Information**
   - Ensure you are using the right tools when destroying and disposing of personal information or media storage from your computer and mobile devices.
   - Destroy/shred hard copy confidential documents that contain personal information such as social security numbers, credit card numbers, bank account numbers, and health records.

3. **Lock it when you leave**
   - It takes only a few seconds to secure your computer and help protect it from unauthorized access. Lock down your computer every time you leave your desk.
   - Set up a screen-saver that will lock your computer after a pre-set amount of time and require a password to log back in.
   - If your computer is used by more than one person, you may want to create individual accounts, with unique login and passwords for each user.
   - Choose a strong password. A good password should always include upper and lowercase letters, numbers, and at least one special character. Do not set the option that allows a computer to remember any password.
4. **Protect Mobile Devices**
   - Password-protect your portable device. (set a 4 – 6 digit pin or password)
   - Be sure all critical information is backed up.
   - Disable Bluetooth when not required.
   - Make sure your firewall and anti-virus are up-to-date.
   - Store your portable devices securely.
   - Record identifying information such as IMEI/serial number and label your equipment if possible.
   - Report the loss or theft to the appropriate authorities as soon as possible.

5. **Protect Data on Mobile Devices**
   - Ask yourself "Is it really necessary that I transport this sensitive information?" If the answer is no, then do not copy the information.
   - Choose a strong password. Never use the same password for multiple devices or accounts.

6. **Ethics-Be a Good Cyber Citizen**
   - Store your portable devices securely. When not in use, store devices out of sight and when possible in a locked drawer or cabinet.

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**Cloud Computing – audit perspective**

Cloud computing:

Generally, cloud computing can be thought of as anything that involves delivering hosted services over the Internet.

According to National Institute of Standards and Technology (NIST), Cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.

Cloud computing is where the organization outsources data processing to computers owned by the vendor. Primarily the vendor hosts the equipment while the organisation still has control over the application and the data. Outsourcing may also include utilizing the vendor’s computers to store, backup, and provide online access to the organization data. The organization will need to have a robust access to the internet if they want their

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1 NIST Special Publication 800-145
staff or users to have ready access to the data or even to the application that processes the data. In the current environment, the data or applications are also available from mobile platforms (laptops with Wi-Fi or cell/mobile cards, smart phones, and tablets).

Cloud computing provides:

- Shared services as opposed to local servers or storage resources
- Enables access to information from most web-enabled hardware
- Allows for cost savings – reduced facility, hardware/software investments, support

Essential Characteristics of cloud computing:

- **On-demand self-service**

  A consumer can unilaterally provision computing capabilities, such as server time and network storage, as needed automatically without requiring human interaction with each service provider.

- **Broad network access**

  Capabilities are available over the network to be accessed through standard mechanisms that promote use by heterogeneous thin or thick client platforms (e.g., mobile phones, tablets, laptops, and workstations).

- **Resource pooling**

  i. The provider’s computing resources are pooled to serve multiple consumers

  ii. Resources can be dynamically assigned and reassigned according to customer demand

  iii. Customer generally may not care where the resources are physically located but should be aware of risks if they are located offshore

  ▶ **Rapid elasticity**

  i. Capabilities can be expanded or released automatically (i.e., more CPU power, or ability to handle additional users)

  ii. To the customer this appears seamless, limitless, and responsive to their changing requirements

  ▶ **Measured service**

  i. Customers are charged for the services they use.

  ii. There is a metering concept where usage of resources by customer can be monitored, controlled, and reported, providing transparency for both the provider and consumer of the utilized service.

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2 Source: NIST Special Publication 800-145
Service Models of Cloud Computing:

The various service models offered as cloud computing can be broadly classified as:

**Infrastructure-as-a-Service (IaaS)**
- A service model that involves outsourcing the basic infrastructure used to support operations—including storage, hardware, servers, and networking components.
- The service provider owns the infrastructure equipment and is responsible for housing, running, and maintaining it. The customer typically pays on a per-use basis.
- The customers use their own platform (Windows, Unix), and applications.

**Platform-as-a-Service (PaaS)**
- A service model that involves outsourcing the basic infrastructure and platform (Windows, Unix)
- PaaS facilitates deploying applications without the cost and complexity of buying and managing the underlying hardware and software where the applications are hosted.
- The customers use their own applications

**Software-as-a-Service (SaaS)**
- Also referred to as “software on demand,” this service model involves outsourcing the infrastructure, platform, and software/applications.
- Typically, these services are available to the customer for a fee, pay-as-you-go, or a no charge model.
- The customer accesses the applications over the internet.
- The customer uses the provider’s applications that are accessible from various client devices through an interface such as a web browser.
- The customer does not manage or control the underlying infrastructure or the individual application capabilities.
Where the data resides:

- Data resides on servers that the customer cannot physically access
- Vendors may store data anywhere at lowest cost if not restrained by agreement

Audit Concerns:

The use of cloud computing services is not without risk for the audited entity or the user of the service. While there are benefits of cloud computing, this needs to be balanced with the degree of risk the audited entity is willing to accept. It is highly unlikely that the service provider would tailor their service for the user. The audited entity must make a conscious decision to manage the associated risk and ensure that any additional controls they put on the service by limiting or filtering content are monitored and enforced.3

Cloud computing cannot be undertaken prior to having an IT strategy or a plan and managing the effort much like any other investment with cost benefit trade-offs and periodic appraisal of the ability of the contractor or meet user requirements.

Cloud Computing Guide for audit:

The INTOSAI WGITA approved the cloud computing project with SAI USA as lead and Canada & India as members for preparing a cloud computing guide and audit handbook

Milestones:

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>A status report was presented and comments solicited</td>
</tr>
<tr>
<td>2012</td>
<td>Final project description and common cloud computing risks were presented. Members requested that this work be augmented with a cloud computing guide and audit handbook</td>
</tr>
<tr>
<td>2013</td>
<td>Guide and handbook was completed for cloud computing</td>
</tr>
<tr>
<td>2013</td>
<td>Was proposed to be incorporated into the overall IT Audit Guide &amp; Handbook in cooperation with IDI</td>
</tr>
<tr>
<td>2016</td>
<td>Cloud computing guide for auditors was released</td>
</tr>
</tbody>
</table>

The guide is about an eight page document that describes cloud computing and areas of risk. These risks should be managed by the IT organization that chooses to utilize cloud computing. The handbook provides the IT Auditor with some audit related questions on whether the organization is managing the risks and the vendor adequately.

Audit Checklist

As an auditor we need to:

- be aware of the risks that the audited entity may face
- Understand what has been done to mitigate the risks with cloud computing.
- whether an entity or organization is getting the envisaged benefits of cloud computing

The risk areas identified in hand book are:

- Service Provider Risks
- Technical Risks
- External (Overseas) Risks
- Management/Oversight Risks
- Security / Connectivity / Privacy Risks

For IT Auditors these risks are a roadmap which can be utilized to create an audit program.

3 INTOSAI –WGITA – Cloud Computing Guide
Audit Comments on Personal Deposit Accounts of various States

Personal Deposit (PD) Accounts are created for discharging the liabilities of the Government under special orders of the Government. The amounts credited to such accounts will be debited to the Consolidated Fund of the State and booked as expenditure of the year. Such accounts are subject to, inter alia, the following conditions:

a) The accounts should be closed at the end of the financial year and the unspent balance should be transferred to the Consolidated Fund of the State.
b) The PD Accounts inoperative for continuous periods should be closed and the balances transferred to Government Account.
c) The balances in the PD Accounts should also be reconciled with the Treasury figures.
d) Monies should not be transferred from the Consolidated Fund to the PD Accounts to avoid lapse of budget provision.
e) Separate Accounts are to be opened for each scheme. Transactions pertaining to more than one scheme should not be accounted for in a single PD Account.

An attempt is made in this article to show the position of common observations on PD Accounts included in the Audit Reports on State Finances of various states for the year ended 31 March 2018. The Reports of the States of Haryana, Kerala, Mizoram, Punjab and Sikkim did not have observations on PD Accounts and the Report of the NCT of Delhi did not have any comments on Lapsable PD Accounts.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>State</th>
<th>Number of Accounts</th>
<th>Balance (Rs. in crore)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Arunachal Pradesh</td>
<td>02</td>
<td>0.32</td>
<td>Significant reduction from Rs.14.63 crore in 2013-14</td>
</tr>
<tr>
<td>2.</td>
<td>Assam</td>
<td>26</td>
<td>0.60</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Chhattisgarh</td>
<td>263</td>
<td>1757.00</td>
<td>Includes Rs.1457.13 crore pertaining to Land Acquisition deposits</td>
</tr>
<tr>
<td>4.</td>
<td>Goa</td>
<td>119</td>
<td>84.69</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Gujarat</td>
<td>482</td>
<td>447.41</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Karnataka</td>
<td>Not Available</td>
<td>2741.52</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Madhya Pradesh</td>
<td>847</td>
<td>5370.06</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Maharashtra</td>
<td>1363</td>
<td>12229.30</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Manipur</td>
<td>02</td>
<td>2.71</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Meghalaya</td>
<td>07</td>
<td>18.81</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Nagaland</td>
<td>01</td>
<td>0.02</td>
<td>No transaction in 2017-18</td>
</tr>
<tr>
<td>12.</td>
<td>Odisha</td>
<td>836</td>
<td>13509.35</td>
<td></td>
</tr>
</tbody>
</table>
Observations on Non-reconciliation had been made in the reports pertaining to Chhattisgarh, Goa, Karnataka, Madhya Pradesh, Maharashtra, Odisha and Telangana.

**Non-closure of inoperative PD Accounts**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>State</th>
<th>Number of Accounts</th>
<th>Balance (Rs. in crore)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Chhattisgarh</td>
<td>10</td>
<td>1.37</td>
<td>Inoperative for more than five years</td>
</tr>
<tr>
<td>2.</td>
<td>Goa</td>
<td>18</td>
<td>0.16</td>
<td>Inoperative for more than five years</td>
</tr>
<tr>
<td>3.</td>
<td>Gujarat</td>
<td>29</td>
<td>2.63</td>
<td>Inoperative for one to seven years</td>
</tr>
<tr>
<td>4.</td>
<td>Karnataka</td>
<td>02</td>
<td>3.05</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Madhya Pradesh</td>
<td>43</td>
<td>10.79</td>
<td>Inoperative for more than three years</td>
</tr>
<tr>
<td>6.</td>
<td>Maharashtra</td>
<td>205</td>
<td>24.15</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Meghalaya</td>
<td>02</td>
<td>0.02</td>
<td>Inoperative for 10 to 14 years</td>
</tr>
<tr>
<td>8.</td>
<td>Odisha</td>
<td>16</td>
<td>0.19</td>
<td>Inoperative for more than three years</td>
</tr>
<tr>
<td>9.</td>
<td>Rajasthan</td>
<td>20</td>
<td>1.98</td>
<td>Inoperative for the last five years</td>
</tr>
<tr>
<td>10.</td>
<td>Telangana</td>
<td>1170*</td>
<td>315.43</td>
<td>Inoperative for more than three years</td>
</tr>
<tr>
<td>11.</td>
<td>Uttar Pradesh</td>
<td>641</td>
<td>108.70</td>
<td>Inoperative for more than three years</td>
</tr>
</tbody>
</table>

*Includes non-lapsable accounts

Non-transfer of unspent balances lying in PD Accounts to the Consolidated Fund of the respective State before the closure of the financial year, non-reconciliation of balances in the PD Accounts periodically and continuing with the accounts which have remained inoperative for a long time entails the risk of misuse of public funds, fraud and misappropriation.

Further, the huge closing balances of the funds provided from the Consolidated Fund indicate non-achievement of the objectives set forth by the respective Legislatures.

In Telangana, an amount of Rs.22875 crore was transferred from Consolidated Fund to the Deposit Accounts in 2017-18 of which Rs.3655 crore was transferred in March 2018 and it was noticed in Audit that an amount of Rs.2300 crore was not expended even as of February 2019.

In Tamil Nadu, though separate authorisations were issued to open separate PD Accounts for each scheme, several Administrators opened a single PD Account to book expenditure under multiple schemes, rendering it impossible to ensure that funds allotted for
different schemes were utilised for intended scheme.
In conclusion, though the observations seem normal and routine for Audit Reports on the Finances of State Governments, the number of PD accounts not closed at the end of each financial year, non-review of the PD accounts which have become inoperative over a period of a few years with consequent inaction to close such accounts and the quantum of balances in these accounts indicates poor financial prudence prevalent amongst the various State Governments.

Privacy and Big Data – Should We be Worried?
In the age of big data the question of information privacy assumes greater poignancy and meaning. Public understanding of privacy is ambivalent, particularly in India, as say, wanting to 'do certain things privately’ but at the same time wishing most other things were transparent. In a society where transparency is a commodity for which one has to fight court battles, it is easy to convince the larger public that less privacy is more of a blessing than not.

Hence, with big data as the enabler, when more of our actions become traceable and more of our multiple identities – the bank account, the social person, the phone number, the income tax payer, the employee, the email user, the online purchaser - get interlinked and converge into one another, we feel we have nothing to worry as long as we have nothing to hide. What if Google knows our gender, age, locality and financial status and uses this information to flash advertisements at us – it is but a small price to pay for all the free browsing and navigation that we have come to depend on so much. What if Netflix and Youtube seem to know exactly what we would like to watch - it has opened up whole new worlds of entertainment to us and given us endless hours of escape from ourselves that we would never have thought possible a few months before. We are likely to be quite convinced that, for an ‘honest' person, privacy is not really that important as all the talk about it seems to suggest.

Part of the reason we still do not have an effective privacy legislation is probably this popular apathy for privacy. Privacy seems to be a pressing concern only for the intelligentsia and public sentiment on the issue is not strong enough to stir the political will to action. This is why any meaningful consideration of the nuances of privacy implementation can begin only after its need is properly understood. On the surface, one can readily discern two key factors that skew the privacy equation, making it meaningless to associate it even remotely with any promise of transparency viz., the fact that information flows effectively only in one direction, and that the access to information and the power to use it is severely imbalanced. Big data analytics encompasses technologies that enable the collection, storage, retrieval and processing of data in huge volumes, in multiple formats and at great speeds. The whole technological setup is so sophisticated and capital intensive that it is viable only to entities with that kind of resources and the power to coerce the public to give up
information about themselves – Governments, big businesses, political parties and the like. None of these, not even governments, are so very benign in their intentions in our experience.

When there are just a few who can collect and use information, and when the power to collect and use it becomes vested in them over time without regulation, big data analytics is no more jargon but a euphemism for plain old word viz., surveillance. When observation is centralized, and when you have no means to know whether, or when, you are being observed, you are being disciplined to subject your will to whoever has the power to do the observation. You are being denied any space for dissent, or even for a difference of opinion. Customized advertisements pretend to read your mind and aid free choice, but in reality predispose your mind to be more favorably oriented towards consumption and create needs that do not exist.

The above are issues that are general in nature and attend any process that enable centers of power to consolidate and retain their influence. Dataveillance (as surveillance resulting from the collection and processing of personal data is now being called) also comes with a host of issues particular to the context in which it is used. These have more to do with the technical and ethical specifics of data analytic applications.

When databases operated in silos, protecting confidentiality was merely a matter of organizational commitment. Even when called upon to give out information, organizations could easily anonymize the data before issue. However, with the advent of big data, the very fact that there is so much data and different aspects of related information are available from multiple sources which can all be combined together, maintenance of anonymity has become a technical impossibility. Big data analytics has created a trade-off situation where we have chosen convenience and near voluntarily gave up any claim over our own privacy. Just think of the number of times we have ‘permitted’ mobile apps to access our videos, contacts, messages and location for the privilege of using it.

Another difficulty has to do with the confidence we seem to have placed unquestioningly on the results of data analytic algorithms. Mathematical formulae are deployed to decide which items are most frequently brought together and those are placed side by side on department store shelves or used to make product recommendations. Predictive algorithms are fine tuned to a high degree of accuracy and used to place objects in appropriate classes based on their characteristics. Given a few set of characters, a computer algorithm will correctly identify an organism in terms of its scientific classification, or diagnose a disease or predict the weather. The same predictive logic will, on the basis of any given set of parameters, say gender, age, income and locality, predict whether a person is likely to default on loan payments, or be a good teacher, employee, manager or will respond well to a certain medical program. This is where things get tricky. No algorithm is ever that accurate. You are likely, in near future, to be denied a bank loan, a credit card or a job, or be set up for the wrong treatment plan, for the simple reason that more number of people of your gender, race, locality, age or income group have been seen to default or perform less in a job or perform well under treatment. You are denied the chance to be an
exception, because your fate is decided by a dehumanized mathematical construct that has no eye for the extraordinary and which sees the world in the most generalized terms alone.

You are also likely to be discriminated on the basis of your gender, age, race or any such factor even if you have not revealed it, for in the world of big data there is nothing that cannot be discovered about you. And this discrimination is all the more potent for its being hidden, undeclared and hence leaves no scope for legal remediation. Contemporary political and social scientists are apprehensive that big data is creating a new social order where Governments not only enforce law and order, but will have the power to define a new ‘normal’ where all citizens are submissive and unquestioning, and corporates can not only sell but define your needs for you.

There is probably no easy solution for this. The fact that whoever has the means to harness big data to their ends - Governments, business houses and the like – will have increasing power over the rest of us is a social constant that we will have to accept and live with, like climate change, depletion of fossil fuels or the threat of a nuclear holocaust. Big data is here to stay. No institution is likely to completely destroy their data repositories, archival technologies or processing algorithms for fear of losing competitive advantage over their rivals, just as they will be reluctant to reduce their carbon foot prints, levels of consumption or nuclear warheads. As long as we continue to define progress in terms of consumption, all its enablers, along with all its consequences will continue to thrive.

Faculty Expressions

Hybrid Annuity Model (HAM) for PPP Projects

Roads play a significant role in achieving national development and contributing to the overall performance and social functioning of the community. India has the second largest road network in the world with a road density of 1.70 km per square kilometre of land. Indian roads are a mix of modern highways, narrow roads and unpaved roads. The road network in India has reached over 5.9 million kilometres in 2019 from 0.4 million km in 1950-51. The major source of financing for road projects in India is budgetary allocation. Due to lack of fund, the development of road network has failed to keep pace with growth in traffic demand. To give boost to the economic development and to improve the quality of the road network, the central government had introduced various structural reforms in 1990s to promote private sector participation in the development of road network. The National Highways Act, 1956 was amended in 1995 to empower private support. In 1998, Government of India introduced the concept of Public Private Partnerships (PPPs). PPPs are long term contractually regulated coordination between public and private sector for the fulfillment of public task in combining the necessary resources of partners and distributing existing project risk according to risk management. During 1990s and 2000s, BOT with toll and BOT with annuity were the commonly adopted models for roadway sector. By mid
2000s, India was one of the leading countries in execution of infrastructure projects through PPP. However, subsequent to global economic slowdown of 2008-2009, many of the ongoing projects experienced slow down and responses to the new projects were not encouraging. Steep decline in PPP participation was observed in 2012-13 and 2013-14 with many viable projects unable to attract even a single bid. Reasons for the slowdown include:

- Over-leveraged financials for developers due to excessive exposure to infrastructure projects.
- Lack of availability of debt products aligned with revenue stream profile of highway projects.
- Banks reaching the ceiling as per sectoral exposure norms.
- Aggressive bidding based on unrealistic traffic projections.
- Inadequate project preparatory activities.
- Projects getting stalled during construction due to Land Acquisition and clearance related issues.

The Government had to revert to EPC / Turnkey mechanism to revive the roadways projects. The hybrid annuity model was conceived during 2015-16 to bring back private participation in highway projects, which had dried up in the last few years. The model is a mix of EPC and BOT formats, with the government and the private enterprise sharing the total project cost in the ratio of 40:60, respectively. Under this new model, government provides 40% of the project cost during the construction period and the release of funds is linked to the progress of construction.

The private player needs to raise the remaining 60% in the form of equity and loan. Since the overall requirement is less, the private bidder needs to put less equity. Similarly, as the loan requirement is less in comparison to the other PPP models, banks will also be comfortable to lend. Government pays back the rest in installments during the entire contract period and it is linked to the performance of the private player and the asset.

The recovery of entire investment is assured as government takes all the risks including collecting user fee and thereby the rise or fall in the total collections does not impact the private participant’s return from the project. It brings greater comfort to the private players and banks to take up such projects.

**Hybrid Annuity Model – overview**

![Hybrid Annuity Model Diagram](image)
The BOT model has structured majority of risks being shared by the Contractor whereas a much balanced risk sharing is envisaged in the HAM. The risk allocation in HAM in comparison to BOT models is as under:

<table>
<thead>
<tr>
<th>Type of Risk</th>
<th>Risk shared in</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BOT(Toll)</td>
</tr>
<tr>
<td>Financial Risk</td>
<td>Private</td>
</tr>
<tr>
<td>O&amp;M Risk</td>
<td>Private</td>
</tr>
<tr>
<td>Revenue Risk</td>
<td>Private</td>
</tr>
<tr>
<td>Political Risk</td>
<td>Government</td>
</tr>
<tr>
<td>Time &amp; Cost over-run during construction</td>
<td>Private</td>
</tr>
</tbody>
</table>

**Salient financial concepts relating to HAM:**

**A- Capital Support**
- 40% of the Bid Project Cost provided by the Authority to the Concessionaire during the construction period in the form of ‘Construction support’.
- ‘Construction support’ to be disbursed in 5 equal installments of 8% each linked to percentage of physical progress.
- Payment adjusted to variation in Price Index from the Bid Date to Reference Index Date preceding the payment milestone.

**B- Mobilization Advance**
- Upto 10% of the Bid Project Cost may be paid by the Authority as Mobilization Advance. The rate of interest on Mobilization Advance is equal to Bank Rate.
- The Mobilization Advance is deducted by the Authority in 4 equal installments from each of the first four payments to be made by the Authority.
- Interest to be recovered from the 5th installment.

**C- Annuity payments during operation period**
- Balance Completion Cost shall be paid in pre-defined bi-annual installments for 15 years.
- The first installment of the annuity payment shall be due and payable within 15 days of 180th day of the Commercial Operation Date (COD).
- The remaining installments shall be due and payable within 15 days of completion of each of the successive 6 months.

**D- O&M payments**
- The biannual payments of the O&M expenses shall be based on cost quoted by selected bidder under its O&M Bid.
- The installment of O&M payment shall be linked with change in the Price Index on due date of payment with respect to Bid date.
E- Bonus on early completion
• In case Concessionaire achieves COD more than 30 days prior to Scheduled Completion Date, the Authority shall pay the Concessionaire a bonus @ 0.5% of Balance Completion Cost for every month by which COD precedes the Scheduled Completion Date.
• No Bonus for first 30 days. Then on pro-rata basis for the entire duration of early completion.

F- Damages for Delay in Completion of Construction
• If COD does not occur prior to the 91st day after the Scheduled Completion Date, Concessionaire shall pay damages to the Authority @ 0.2% of the amount of Performance Security for each day delay until COD is achieved.

More than 50 road projects have been awarded under HAM so far. Some of the major projects awarded under HAM which are in the operations and maintenance stage are as under:

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Location</th>
<th>Project Capacity</th>
<th>Concession Duration (In Months)</th>
<th>Project Authority Name</th>
<th>Project Concessionaire Name</th>
<th>Concession Agreement Signing Date</th>
<th>Project Cost in Rs Crore</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four Laning of Lucknow Sultanpur Section of NH-56</td>
<td>Uttar Pradesh</td>
<td>Not Available</td>
<td>210</td>
<td>MoRTH</td>
<td>Not Available</td>
<td>Not Available</td>
<td>1,638.44</td>
</tr>
<tr>
<td>Four laning of end of Pandoh bypass to Takoli section on NH-21 from 221.3 km to 242.0 km NHDP-IVB (Package-II)</td>
<td>Himachal Pradesh</td>
<td>20.7 KM</td>
<td>120</td>
<td>NHAI</td>
<td>Shapoorji Pallonji Pandoh Takoli Highway Private Limited</td>
<td>10-Aug-2017</td>
<td>2,600.00</td>
</tr>
<tr>
<td>Six-laning of Chakeri-Allahabad section from 483.687 to km 628.753 km of NH-2 in Uttar Pradesh on Hybrid Annuity Mode (HAM) under NHDP Phase-V on Hybrid Annuity Mode (HAM).</td>
<td>Uttar Pradesh</td>
<td>145.3 KM</td>
<td>180</td>
<td>NHAI</td>
<td>PNC Infratech Limited</td>
<td>31-Mar-2017</td>
<td>1,430.16</td>
</tr>
<tr>
<td>Six laning of Handia-Varanasi section of NH-2 from 713.1 km to 785.5 km in Varanasi district under NHDP-V.</td>
<td>Uttar Pradesh</td>
<td>72.4 KM</td>
<td>180</td>
<td>NHAI</td>
<td>G R Infraprojects Limited</td>
<td>31-Mar-2017</td>
<td>2,356.16</td>
</tr>
</tbody>
</table>
What is Way Bill?

A Waybill is a document issued by a transporter/carrier giving details relating to the shipment of a consignment of goods from a seller to a buyer. Typically, it contains the names of the consignor and consignee, the point of origin of the consignment and its destination.

E-Way Bill

Consequent to the introduction of Central Goods & Services Tax (CGST) Act 2017 by Government of India, the concept of E-way bill came into force from 1 February 2018. E-Way Bill (EWB) is an Electronic Way bill for movement of goods. An E-way bill must be generated when there is a movement/transportation of goods of more than Rs. 50,000 in value (Single Invoice/Aggregate of all invoices in a vehicle/bill/delivery challan) in a vehicle, to or from a registered person. It means either the supplier or recipient of the goods should generate the EWB. This EWB should be generated on the GST portal of the Government of India, viz. www.ewaybillgst.gov.in. E-way bill can also be generated or cancelled through SMS and through any Android App.

Provisions of the Act

Rule 138 of Central Goods & Services Tax (CGST) Rules, 2017 (amended), contain details relating to the information to be furnished prior to commencement of movement of goods and generation of E-way bill, list of documents to be carried by the carrier of goods, mode of verification of documents, inspection of goods and also penal provisions for failure in this regard.

Supply of goods

The transportation/movement of goods could be in relation to a ‘supply’, for reasons other than a ‘supply’ (viz goods return, for exhibition/fair, sale on approval basis, etc) or due to inward ‘supply’ from an unregistered person. For this purpose, Supply may be either with consideration, without consideration (transfer between branches) and barter (goods for money).

Two-parts of E-Way Bill

An EWB contains two parts, Part A & B. Part A to be furnished by the person who is causing movement of goods. It contain GSTIN of supplier and/or recipient, place of
delivery, Invoice no.& date, value of goods, HSN code along with reasons for transportation (supply, export, import, exhibition, etc.). Part-B to be furnished by the person who is transporting the goods. It contain vehicle details, place of origin, mode of transport and date of document. Contents of Part-A of the EWB Form can't be edited or modified once generated. However, Part-B can be updated with Vehicle details/ RR/Airway Bill etc. The EWB can be assigned from one transporter to another transporter, for further movement of consignment, wherein the latest transporter, assigned for that EWB can update Part-B of EWB.

Exceptions for filling up Part-B of E-Way Bill

In case of transport of goods for a distance of more than 10 km but less than 50 km, generation of EWB is mandatory but it is not mandatory to mention the details of the conveyance in the EWB. Part-B of EWB need not be filled where the distance between the consignor or consignee and the transporter is less than 50 km and transport is within the same state.

Generation of E-Way Bill

Though the rule stipulates that EWB is required to be generated for movement of goods valuing Rs.50,000 and above, a Registered person or the transporter may choose to generate and carry EWB even if the value of goods is less than Rs 50,000. Similarly, where a supply is made by an unregistered person to a registered person, the receiver will have to ensure all the compliance as if they were the supplier. It is the responsibility of the transporter to generate EWB if the supplier has not generated an EWB. Similarly, EWB is compulsory even without threshold limit of Rs.50000 for inter-state movement for job work.

EWB needs to be generated even if the goods are transported by own conveyance as a consignor or consignee. Where the goods are handed over to the transporter, necessary details should be furnished to the transporter who will generate the EWB.

Consolidated E-Way Bill

If a transporter is transporting multiple consignments in a single conveyance, they can use a prescribed form to produce a consolidated EWB which will contain the EWB numbers of each consignment.

Trans-shipment of goods

In case of trans-shipment (i.e., shipment of goods or containers to an intermediate destination and then to another destination or change in mode of transport, etc), only one EWB needs to be generated against the Invoice. Generation of different EWBs against a single invoice is not possible. As mentioned earlier, Transporter can also re-assign EWB to another transporter by updating transporter ID on the web portal immediately before effecting such transfer.

Validity of E-way Bill

EWB is valid for one day for every 100 km and for Over Dimensional Vehicle,¹ it is 20 km per day and will expire on the midnight. The ‘relevant date’ shall mean the date on which the e-way bill has been generated (with Part-B updated) and the period of
validity shall be counted from the time at which the EWB has been generated. The validity can be extended online 4 hours before and 4 hours after the expiry of validity. Validity of EWB can be extended by the Transporter for reasons of exceptional circumstances, viz Natural Calamity, Law and Order Situation, Trans-shipment issues and Accident of Conveyance.

Cancellation of E-Way Bill
There are provisions for cancellation of EWB also. If EWB is generated with wrong information it can be cancelled and a new EWB can be generated. The person who generated the EWB can cancel it within 24 hours. Similarly, the Recipient can reject the e-Way Bill within 72 hours of generation.

E-Way Bill generated, but goods not transported
In such cases, the EWB should be cancelled within 24 hours of its generation. However, in case the goods are moved but subsequently the movement was cancelled after EWB had been verified in transit, the EWB cannot be cancelled in such cases.

Exemption from EWB
1. Certain goods specified under Rule 138 (14) in the respective State /Union Territory GST rules are exempted for EWB. As of now, exemption from EWB is applicable for 154 items. The list includes LPG, Kerosene, Postal baggage, Precious stones, Jewellery, Currency, Used Personal House hold effects, Corals, etc.
2. The mode of transport is non-motor vehicle
3. Transported under Customs Supervision / Clearance;
4. Goods are alcoholic liquor for human consumption and 5 petroleum Products, viz Supply of Petroleum Crude, High Speed Diesel, Motor Spirit, Natural Gas, and ATF;
5. Treated as no supply under Schedule III of the Act;
6. Transit cargo from or to Nepal or Bhutan;
7. Where the goods being transported are exempt from tax.
8. Any movement of goods caused by defence formation under Ministry of Defence as a consignor or consignee;
9. Where the consignor of goods is the Central Government, Government of any State or a local authority for transport of goods by rail;
10. Where empty cargo containers are being transported;
11. For Weighment up to a distance of 20 kilometers from the place of the business of the consignor to a weighbridge within the State

Integration with Vaahan
EWB system is now integrated with Vaahan system of Transport Department. Vehicle (RC) number entered in EWB will be verified with Vaahan data for its existence/correctness. If the vehicle number does not exist, then system will alert the user to check and correct, if required. If the vehicle (RC) number is correct as per the tax payer, then he can continue with generation of E-Way Bill. However, he needs to get the vehicle number updated in the Vaahan database so that in future EWB generation will not be affected.
## Sample E-Way Bill

**E-Way Bill No:**

**E-Way Bill Date:** 01/10/2018 06:47 PM

**Generated By:** Code and name of company who generated e-way bill

**Valid From:** 01/10/2018 06:47 PM [3000Kms]

**Valid Until:** 31/10/2018

### Part A

- **GSTR of Supplier:** Ex. 29AAAAA4121D1ZE
- **Place of Dispatch:** Bengaluru (Bangalore) Urban, KARNATAKA-560021
- **GSTR of Recipient:** Ex. 29AAAAA4122D1ZE
- **Place of Delivery:** Mangalore
- **Document No.:** 1
- **Document Date:** 01/10/2018
- **Value of Goods:** ₹ 29400
- **HSN Code:** Ex. 42022190
- **Reason for Transportation:** Outward - Supply
- **Transporter:** Example transporter

### Part B

<table>
<thead>
<tr>
<th>Mode</th>
<th>Vehicle/Trans</th>
<th>From</th>
<th>Entered Date</th>
<th>Entered By</th>
<th>CEW No.</th>
<th>Multi Veh Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road</td>
<td>BANGALORE</td>
<td>01/10/2018</td>
<td>06:47 PM</td>
<td>Name</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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