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### 60th AGM held at Pimpri-Chinchwad-Akurdi Chapter on 6th August 2019



CMA Shriram Mahankaliwar, Hon. Secretary, WIRC, CMA Pradip H. Desai, Vice-Chairman, WIRC, CMA Laxman Pawar, Chairman, WIRC and CMA Harshad Deshpande, Treasurer WIRC.

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# WESTERN INDIA REGIONAL COUNCIL THE INSTITUTE OF COST ACCOUNTANTS OF INDIA

(Statutory Body under an Act of Parliament)

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### From the Desk of Chairman

Dear CMA Members,

"It's better to burn out than fade away"- Neil Young

At the outset I should congratulate CMA Balwinder Singh, President of the Institute of Cost Accountants of India for the year 2019-20 and CMA Biswarup Basu, Vice-President of the Institute of Cost Accountants of India. We hope under their leadership the Institute will reach greater heights and make us as proud to be CMAs.

I also congratulate the new elected Central Council and Regional Council for the year 2019-23 and hope we achieve all our unfinished dreams for make CMAs the best profession of the world.

It is my duty to state that I had tried my level best in completing the agenda for providing CMAs the best of opportunities may it be Certification of ESI Return and Certification of assignments of Municipal Corporation.

I along with the Council have included for inclusion of CMAs for Financial Audit of Co-operative Societies in Maharashtra and succeeded and was motivated to make all round ardent efforts through State Representatives of each State representing our Committees for Government Representation. We carried out efforts in representating to State Governments of Gujarat, Chattisgarh, Madhya Pradesh and Goa respectively. We received positive response from each State and I hope our unfinished agenda would be taken over by new Council and make us eliqible to audit in all states of Western Region for Co-operative Audits.

In case of audit of Trusts which would open a huge opportunity across the country we at WIRC had made all round efforts in inclusion of CMAs in Trust Audits. The matter being at the culmination stage and I hope the new Council of WIRC would soon make CMAs for such Audit across the country.

WIRC conducted a record number of CEPs, Workshops, Seminars and professional development activities at Mumbai and has enabled capacity building and enhancement of knowledge dissemination of the members in areas like Cost Audit, Taxation, Compliance Management, Strategic Management, Banking, Insurance, Valuation, Insolvency and organized quiz competition and sports development for engagement of members and ensured strong interface with members with the Institute.

We took active role for inclusion of Cost Audit in Sugar Factories in Maharashtra and many of our peers has been empanelled for such work from the Region.

We organized the National Seminar / Regional Cost Convention which in the history of WIRC had made self-sustaining and enabled a sizeable surplus. WIRC's Financial position was also positive for the entire year and had made sizeable surplus for the entire year through cost reduction methods. The student strength also enhanced during the current year through effective Career Counselling Programmes and considerable student interface.

WIRC also connected with ASSOCHAM, IMC for collaborated efforts and also had close affinity with MCA, NCLT, CGST and other Government Bodies for development of the professional to the hilt.

WIRC also took active role in formation of new chapters like Solapur Chapter and Bharuch-Ankleshwar Chapter. We had a positive role for inception of Singrauli Chapter which would see the light of the day soon.

I would like to thank the students, members, officials of Institute, stakeholders associated with the Institute as I bid adieu as Chairman of WIRC and wish for their welfare from the core of my heart.

CMA Laxman Pawar

Chairman, WIRC

# Minutes of the 60th Annual General Meeting of WIRC of The Institute of Cost Accountants of India held on 6th August 2019 at 6.30 p.m. at The Institute of Cost Accountants of India, Pimpri-Chinchwad-Akurdi Chapter

CMA Laxman D. Pawar, Chairman, CMA Pradip H. Desai, Vice-Chairman, CMA Shriram N. Mahankaliwar, Hon. Secretary, CMA Harshad S. Deshpande, Treasurer were on the dais.

CMA Laxman D. Pawar chaired the meeting. He welcomed the members for the AGM.

CMAS. C. Gupta, Sr. Director attended as an Observer for the AGM appointed by the Headquarters.

The Members observed two minutes silence as a mark of respect towards the departed soul of deceased members during the year.

After confirming the quorum, Chairman requested, CMA Shriram N. Mahankaliwar, Hon. Secretary WIRC to start the proceedings of the meeting as per agenda.

Hon'ble Secretary read out the Agenda of the meeting as per the notice and put for discussion.

### 1. To receive the Western India Regional Council's 60th Annual Report.

CMA Prashant Vaze (M/28236) proposed by CMA Bhavesh Marolia (M/32282) seconded the resolution.

"RESOLVED THAT the Sixtieth Annual Report of Western India Regional Council of The Institute of Cost Accountants of India for the year 2018-19, be and is hereby received & approved.

The Resolution was passed with majority by voice vote.

### 2. To consider and adopt the Accounts of the Western India Regional Council for the year ended 31st March, 2019 together with the Auditor's Report thereon.

CMA Balkrishna Ananda Hajare (M/41825) proposed and CMA B.G.Pate (M/41859) seconded the resolution.

CMA Harshad S. Deshpande, Treasurer of WIRC resolved the queries put up by certain members.

"RESOLVED THAT the Audited Income and Expenditure account of the Western India Regional Council of The Institute of Cost Accountants of India for the financial year ended 31st March 2019, and the Balance Sheet as on date, together with the Auditor's Report thereon, be and are hereby adopted."

The Resolution was passed with majority by voice vote.

### 3. To Appoint Auditors for the year 2019-20 and fix their remuneration.

CMA Ajit B. Shinde (M/38065) proposed & CMA Kaka M. Lande (M/34407) seconded the Resolution.

"RESOLVED THAT Shri Vikas M. Vishwasrao, Chartered Accountant be and are hereby appointed as Auditor to audit the Accounts of Western India Regional Council of The Institute of Cost Accountants of India for the year 2019-20 at remuneration of Rs. 50,000/- and lumpsum out of pocket expenses of Rs. 5,000/- & GST at applicable rate.

The Resolution was passed with majority by voice vote.

4. To transact any other business as may be brought before the meeting with the permission of the Chair.

CMA Laxman D. Pawar, Chairman replied to the resolutions and queries put up by CMA Dr. Ashish P. Thatte (M/27543) to the satisfaction of the members and finally proposed a vote of thanks to the Chair and declared the end of the meeting.

# CONGRATULATIONS OFFICE BEARERS OF WIRC OF ICAI FOR THE YEAR 2019-20

CMA Shriram Narayan Mahankaliwar Chairman

CMA Dinesh Kumar Birla
Vice-Chairman

CMA Harshad Shamkant Deshpande
Hon. Secretary

CMA Mahendra Tulshiram Bhombe
Treasurer

### ICAI ELECTION RESULTS

In the ICAI Elections to Central & Regional Councils for the term 2019-23 the following Members have been elected from Western India Regional Council.

### **Central Council**

CMA Ashwinkumar Gordhanbhai Dalwadi

CMA Neeraj Dhananjay Joshi

CMA Debasish Mitra

CMA Ashish Prakash Thatte

### Regional Council

CMA Ashishkumar Sureshchandra Bhavsar

CMA Mahendra Tulshiram Bhombe

CMA Dinesh Kumar Birla

CMA Harshad Shamkant Deshpande

CMA Arindam Goswami

CMA Vinayak Balkrishna Kulkarni

CMA Shriram Narayan Mahankaliwar

CMA Chaitanya Laxmanrao Mohrir



# Lifestyle Design: How to create the life you want

CMA (Dr.) S. K. Gupta

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If you're not living the life you want to right now, you should be working to get there.

Lifestyle design has become a trendy phrase in the past few years, but I'm not sure how many people contemplate the meaning of those words. Lifestyle design is a catchall buzzword which has received a lot of attention lately, ever since Timothy Ferriss' book The 4-Hour work Week: Escape 9-5, Live Anywhere, and Join the New Rich broke into the public consciousness in 2007. Lifestyle design means designing your life the way you want it to be. It's when you create yourself and your environment and turn your vision into reality. Lifestyle design is about freedom. reclaiming your time and doing things you like. It's about spending each day in the best way possible, feeling the way you want to, and making it all meaningful by helping others with what you do and leaving a dent in the universe. In a nutshell, lifestyle design embodies the attempt on your part to design a life of your choosing, whatever that looks like. It's your life, your plan, and you call the shots.

### Lifestyle - Design - Lifestyle Design

Transforming your life means shifting your mindset too. Rejecting conventional wisdom isn't possible without becoming a strong individual, building resilient personal qualities and habits, and constantly challenging yourself. Lifestyle design is life outside of a comfort zone. So you'll need to try new, often untested things and see how it goes. 'Lifestyle' describe how you choose to experience your life as a "lifestyle". It is the pattern of habits viz. how you spend your time, energy and money. Those habits include how you work, have fun, learn, energize yourself, spend time with other people and generally engage with life. 'Design' Means an intentional plan based on thoughtful research outlining the actions to be taken to achieve a specific purpose. Design is used in each and every aspect of our lives from the house you live in to the car you drive to the clothes you wear to this website you are using right now. Funny how "design" has made our modern lives possible, yet most of us don't think of using it as an approach for living our ideal lifestyles. Too many of us our stuck in "survival mode" as our limited personal resources of time. Lifestyle design' is living every aspect of your life with intention by living in complete alignment with your purpose, values, motivations, abilities and needs. My version of lifestyle design is about living a self-directed life. It's about making your own daily schedule. It's about work on your terms. It's about building a lifestyle around more meaningful work. Lifestyle design puts you in the best state possible for accomplishing what you want in life. Lifestyle design is a concept that discards

the old theories on what you should do in life, but talks about doing what you want to do. Living a life that puts a smile on your face every morning when you wake up at 10am. It's about working out a way to live your life in the way that you want to, working how you want to work, it allows you to travel the world, meet awesome people and generally live an exciting, exotic life. We all have different definitions of happiness and success, and the whole point of lifestyle design is to define it for yourself, then work to get it. And if the term lifestyle design throws you off, you might even call it "finding your purpose."

- Why are you here?
- What do you want to achieve in this world?
- What do you love to do most?
- Where would you most like to do it?
- Who would you most like to do it with?
- What sort of impact on others do you hope to make doing what you do?

These are all questions a lifestyle designer might ask themselves before embarking on their journey of exploration and adventure. As humans, we all look for meaning in life, searching constantly for an answer to the "why am I here?" question. We want to know what the point of it all is, and how we can make our time here on this earth amazingly relevant. Lifestyle designers make it their mission to answer that question fully and live life on purpose, with purpose.

### Where it all begins

Lifestyle design is absolutely possible, but it begins with drawing a picture of your ideal life. Include your dream job, the people you want in it, the person you want to become and the ways in which you want to spend your time and money. A lifestyle designer takes conscious decisions and knows that if specific goals are defined, if there's a strategy, if daily choices are made with the end vision in mind, anything is possible. You must be clear about what you want in your life, and set aside even more time and put even more thought into understanding what needs to be eliminated. You also can't go without continuous learning. Lifestyle design means filling your days with...

- People that energize you
- Work that fulfills you
- Places that invigorate you
- Habits that motivate you
- Ideas that inspire you

Lifestyle design puts you in the best state possible for accomplishing what you want in life.

### Living The Life You Want to

"Awareness is the greatest agent for change. The primary cause of unhappiness is never the situation but thought about it. Be aware of the thoughts you are thinking. Separate them from the situation, which is always neutral. It is as it is". - Eckhart Tolle

Lifestyle design is about creating situations. They're neither good nor bad and are completely incapable of generating meaning on their own. If you accept that, you can release your expectation that the external conditions of your life are responsible for how you feel. To experience your best life, you need to create your best life. To master the art of lifestyle design you need to stop seeing money as a source to buy things. You must see money as a tool to help you create the life experiences and freedoms that will make you feel like you are living a fulfilled, accomplished, and happy. This is the magic I call: "Lifestyle Design." If you can design your future to feel good all the time, then you'll naturally begin to live a life where you feel good all the time. In short: Find the things that make you the happiest, and then use your money to design your life to experience these things as much as you can.

### It's not 'Luck' - It's lifestyle design

Lifestyle design is about examining your life and your goals and thinking unconventionally about how to make things possible now instead of later. It's about designing your life instead of letting society design it for you. Lifestyle Design is the ability to take the resources you have (money and skills), and transform them into the life your soul craves to live. Rather than waiting for a random life to form around you based on the spontaneity of luck, lifestyle design is the act of creating the life you want to live using hard-work, discipline, and vision. Everyone can take advantage of certain elements of lifestyle design. At its most basic level The four tools you need to design your life:

- 1. **Self-awareness:** Your life is the sum of your habits. Your self-knowledge directs the development of your habits. As you practice self-awareness and learn about yourself, you will become aware of the habits that will have the greatest impact on helping you design your ideal lifestyle. You'll never know what life you want to live, until you can learn to hear yourself think. You must be able to travel deep inside of yourself to find the source of your own thoughts. You must know yourself, before you can know what you are supposed to do.
- 2. **Financial resources:** A human can't achieve his dreams in life, until they can acquire the proper tools and teams to leverage them appropriately. Money is the resource that you can transform into anything you need. Money can help you buy the right tools and means for realizing your dream life.
- 3. **Psychology:** A human being can't enjoy their life, until they can convince themselves to be grateful and appreciate what they have. You must master the

- psychology of your own mind to unlock the happiness that is often right in front of you.
- 4. **Spirituality:** Why are you alive? What were you created to do? What does your soul crave to experience, see, and create while you are alive? You have to be able to find your why, before you can devise your plan of what, where, and how. Spirituality can be the guest that can help you find your why.

### Conclusion

The results of lifestyle design manifest differently for everyone. Whatever that looks like for you, start embracing a life with yourself at the center and see what magic unfolds. "Lifestyle Design" is the ability to bring the tools of self-awareness, finance, psychology, and spirituality together to create the life that makes you the happiest. I recently read a quote that summed this subject up. The quote read: "Build Icebergs with your life, not skyscrapers." Realize that the achievements in life (the skyscrapers) are things everyone can see. But it's the icebergs in life, (the power of the soul and subconscious) that guides people to live their best lives.

### At the Helm



Our heartiest congratulations to **CMA Sanjiv Soni** for assuming the position of Director (Finance) in Coal India Ltd. CMA Sanjiv Soni is a member of Western India Regional Council of the Institute of Cost Accountants of India.

We wish CMA Sanjiv Soni the very best for all his future endeavours.



# Reforms, regulatory aspects & legal compliances for Start-ups

CMA (Dr.) Subir Kumar Banerjee

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Startups means to act of setting in operation or motion. In business terminology, the startups are the young companies which are incorporated by founders or individual to offer a product or service which is not available in the market or owner believes that such product or service is available in inferior quality.

As per DIPP notification startup can be in a form of Private Company, Partnership firm or Limited Liability Partnership. Turnover of startup for any of the financial years should not exceed Rs 25 crore from since incorporation. An organization formed by splitting or by reconstruction of the existing business will not be treated as a Startup. If in any fiscal year turnover of the startup exceeds to Rs 25 crore, it will be ceased to be called startup.

### **Government and Regulatory Policies**

The 'Startup India' initiative of the Government of India, launched in January 2016, was touted to provide a kick-start to early stage companies by relaxing certain compliances for such companies. Under this initiative, an Indian entity not older than 7 years and fulfilling certain conditions with respect to turnover is entitled to certain benefits, like selfcertification with respect to compliance with a few environmental and labour laws, access to certain funds from the Government of India, income tax exemption for 3 years in a block of 7 years (if incorporated after April 1, 2016), exemption from capital gains tax for 3 years, etc. However, the initiative failed to achieve the desired potential.

Out of the 6,096 (recognized as 'start-ups' by the Department of Industrial Policy and Promotion (DIPP),only 74 start-ups ended up receiving approval for availing tax benefits under the Startup India initiative, because there is discretion in the hands of the interministerial board which has been constituted for the purpose of approving / rejecting the grant of tax exemptions to start-ups. Drawing a corollary with Singapore – as long as the start-up is a tax resident of Singapore and the number of shareholders do not exceed 20 in a given assessment year, the tax exemption is applicable to it, for the first 3 years. Safe to conclude that simplicity in regulation and lack of regulatory discretion works as an incentive for start-ups.

#### Regulatory Aspects and Mindset of regulators

With the intent of increasing avenues for capital raise for Indian promoters, the Government of India inter-alia liberalized the sought-after sectors such as single-brand retail trading, e-commerce and regulated financial services and permitted issuance of convertible notes to foreign investors in start-ups. Let's look at some of the regulatory conundrums plaguing the start-up ecosystem.

- 1. Angel Tax: If we analyse the Indian start-up funding space, angel funding plays a significant role in terms of lending credibility to start-ups and helping them reach a stage where they can confidently scout for Series A capital. As a tacit principle of the start-up world, funds brought in by the angels and venture capital funds, are generally at a premium to the fair market value of the shares of the company.
  - In such cases, the company was liable to pay income tax on the difference. Such provision was regressive. The Government of India provided an exemption from such tax liability to start-ups incorporated before 2016. Any further exemption on this tax shall be subject to the approval of an interministerial board subject to fulfillment of certain criteria.
- 2. **Cost of Compliance:** Speaking of cost for compliance, complying with existing laws and continuous education for employees on change in laws, comes at a cost. Some of the most common ones being, filings under various corporate laws, obtaining a valuation report under foreign exchange laws, compliances under state and central labour laws.
  - Some of the compliances are burdensome. These requirements seem onerous.
- 3. **Choice of Offshore Jurisdiction:** Burdensome compliances, restrictions imposed under the foreign exchange laws and taxes payable at the time of providing exit to investors, better corporate tax rates in other countries, are some of the compelling reasons for Indian promoters to look for incorporation of their start-ups in offshore jurisdictions like Singapore, United States of America and other countries.

Legal Challenges Faced by a Startup in India

Here are some common legal issues entrepreneurs will face:

### 1. What business structure should I use?

Depending on that, the structure of the business is formulated - whether it would be a sole proprietorship, partnership, private limited company, public company or a limited liability partnership.

Here is a quick look into the legal implications for the major business types in India:

Legal Details		Business Types		
	Proprietorship	Partnership	Limited Liability Company (LLP)	Private Limited Company
Registration	No formal registration required	Registration is optional	Has to be registered with the Ministry of Corporate Affairs under the LLP Act 2008	Has to be registered with Corporate Affairs under the Companies Act 2013
Legal Status	Not recognised as a separate entity and promoter is person- ally responsible for all liabilities	Not recognised as a separate entity and promoters are personally respon- sible for all liabilities	Is a separate legal entity. The promoters of the LLP are not personally liable towards the LLP	Is a separate legal entity. The promoters of the company are not personally liable towards the company
Member Liability	Unlimited liability	Unlimited liability	Limited liability to the extent of contribution towards to the LLP	Limited Liability to the extent of share capital
Number of Members Required	Can only have one person	Minimum of two persons required to start a Partnership	Minimum of two persons required to start a LLP	Minimum of one person required to start a Pri- vate Limited Company
Transferability	Not transferable	Not transferable	Ownership can be transferred	Ownership can be transferred by means of share transfer
Taxation	Taxed as individual, based on total income of proprietor Income Tax Act, 1961 plus surcharge and cess as applicable plus	Partnership profits are taxed as per the slabs provided surcharge and cess as applicable	LLP profits are taxed as per the slabs provided under Income Tax Act, 1961	Private Limited Company profits are taxed as per the slabs provided under Income Tax Act, 1961 plus surcharge and cess as applicable
Annual Statutory Meetings	No requirement for annual statutory meetings	No requirement for annual statutory meetings	No requirement for annual statutory meetings	Board and General Meetings should be conducted periodically
Annual Filings	No requirement to file annual report with the Registrar of Companies. Income tax to be filed on the income of the proprietorship	No requirement to file annual report with the Registrar of Companies. Income tax to be filed for the partnership	Must file Annual Statement of Returns & Solvency and Annual Return with the Registrar every year. Tax returns must also be filed annually	Must file Annual Statement of Returns & Solvency and Annual Return with the Registrar every year. Tax returns must also be filed annually
Existence or Survivability	Proprietorship existence is dependant on proprietor	Partnership existence is dependant on partners. Can be dissolved at will or upon on the death of partner(s)	Existence not dependent on partners. Can be dissolved voluntarily or by order of the Company Law Board	Existence not dependent on directors or shareholders. Can be dissolved voluntarily or by Regulatory Authorities
Foreign Ownership	Foreigners are not allowed to be sole proprietors	Foreigners are not allowed to be part of a partnership	Foreigners are allowed in invest with/without the approval of the Reserve Bank of India (RBI) and other applicable permissions for the relevant Government of India authorities depending on the category of business they are interested to invest.	Foreigners are allowed to invest with/without the approval of RBI and other applicable permissions for the relevant Government of India authorities depending on the category of business they are interested to invest.

### 2. How should I avoid legal problems with employees (Labour Laws)?

When a startup commences operations and hires employees, it is subject to the labor laws of the country. A significant challenge for startups is to ensure that it is compliant with all the applicable labor laws. Some of these laws pertain to minimum wages, payment of gratuity and provident fund, maternity benefits, and prevention of sexual harassment at the workplace. Startups registered under the Startup India initiative can make a self-declaration for nine labor laws within one year of incorporation and get an exemption from labor inspection.

### 3. Should I use a non-disclosure agreement?

If your company is looking to share propriety information with another company with the intent of potentially forming a joint venture, then it might be appropriate to have a non-disclosure agreement in place. It is important to make sure the nondisclosure agreement is very detailed and lays out exactly what proprietary information will be shared.

- 4. Listing Requirements: If a startup wishes to list its securities in a stock exchange, it has to comply with relevant SEBI regulations. These regulations pertain to the conditions that a startup has to fulfill before it can list its securities, the disclosures that are to be made, the compliances to be adhered to, etc.
- 5. Protection of Intellectual Property: As startups advance, they create intellectual property (IP) along the way. It includes codes, algorithms, designs, research findings, etc. It is essential to protect this IP to prevent its misuse by other competitors or entities and also to reap commercial benefits. Most startups do not realize this and later face the consequences. To avoid this, startup founders need

- to be aware of basic tenets of intellectual property rights.
- 6. Corporate Governance: This aspect poses a significant challenge for startups. Many startups do not pay much attention to formulate rules to run the business and simultaneously protect the interests of investors, management and other stakeholders. Consequently, they end up embroiled in issues such as conflict of interest, misuse of company resources and mismanagement. Having a sound corporate governance policy that evolves with the growth of the startup plays a crucial role.
- 7. Taxation: Full compliance with tax laws is a must to avoid penalties and punishment. Startups have to be clear about their tax liabilities. Different sectors attract different taxes. Startups have to make sure that they are aware of the new taxes, their liabilities and how it impacts their business model.

Every startup faces these legal challenges. The ones that sustain themselves have adequate systems in place to deal with them. For long-term efficient functioning of a startup, it is essential that it starts checking the boxes concerning legal compliances and business governance requirements. If not addressed timely, it may even cause the start-up's downfall.

#### References

- https://kredily.com/annual-compliance-checklist-startupssmes-india/
- 2. https://taxguru.in/income-tax/10-important-taxregulatory-framework-startups-2018.html
- 3. https://www.wework.com/creator/run-your-business/hrhuman-resources/10-legal-2.issuesentrepreneurs-needknow/
- 4. https://www.lawyered.in/legal-disrupt/articles/legal-challenges-faced-startup-india/
- 5. http://www.nishithdesai.com/information/news-storage/ news-details/article/regulatoryconundrum-for-start-ups-inindia.html

### **CEPs at WIRC**

- CEP on "How to file Income Tax Return" was organised by WIRC on 12th July 2019 at WIRC Office. CMA R. R. Ahirwar was the speaker.
- "Discussion on Union Budget 2019" was organised by WIRC at Borivali SMFC on 13th July 2019 & at Thane SMFC on 14th July 2019 respectively. CMA K. M. Riyazuddin, Former DGM (Finance), Bharat Petroleum Co. Ltd, Mr. Rajesh Patil, Director, Global Business Tax, Deloitte Haskins & Sells LLP and Mr. Hardik Gandhi, Director, Indirect Tax, Deloitte Haskins & Sells LLP were the speakers at Borivali SMFC. Ms. Anjana Singh, Director, Global Business Tax, Deloitte Haskins & Sells LLP and Mr Sandeep Gupta, Senior Manager, Indirect Tax, Deloitte Haskins & Sells LLP were the speakers for Thane SMFC.
- CEP on "Budget Analysis with Special Emphasis on Start-ups" was organised by WIRC on 19th July 2019 at WIRC Office. CMA Virag Shah, Founder Connect Easy, Virtual CFO Services & Mr. Vivek Shah, Practicing Chartered Accountant were the speakers.
- CEP on "Overview of Financial Concurrence and Control for Public Sector Undertakings (PSUs)" was organised by WIRC on 28th July 2019 at Thane SMFC. CMA Arup Bagui, DGM (Finance) Konkan Railway Corporation Ltd. was the speaker.



### Make versus Buy case study

### CMA Himanshu Kachhela

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Company ABC Ltd. is a manufacturing company engaged in the manufacturing of valves. They have been in the business for last 3 years and have been manufacturing only one type of valves. They started their business initially with sales of 1,500 valves per month and now they have grown the volume to about 5,000 valves per month. The capacity of the plant with existing set up is 1,00,000 valve per year.

They have been buying all the raw material for the valve and were doing all the manufacturing in house. Now they have established themselves in the market and are planning to expand and produce different varieties of valves. They have their plant in the main city and the total area of the plant is 50,000 sq. ft. If they want to expand and continue doing all the activities of manufacturing of all the varieties in house, they would need another 50,000 sq.ft. of the area.

In the recent times, the land prices in the area have more than doubled in the last 3 years and still land is available with great difficulty. Mr. Rahul is the production head of ABC Ltd. and has been successful with the production and the level is continuously increasing. But in recent times, he is facing the problem of quality complaints which have gone up from average 0.2 % in previous 2 years to 0.5 % this year. Also, he is finding that there is a high level of dissatisfaction among the workers regarding workload as well as salary levels. The workers are regularly complaining about the over work. Although, Mr. Rahul has found that the workers have been spending lot of time on tea breaks, lunch breaks and even in between the production spending lot of time talking to each other. But, due to insufficient workers and staff, he is unable to take strict action and the workers are taking advantage of this situation. For completing the work and delivering the products timely, he should employ workers on overtime and his overtime cost has also increased 3

Mr. Rahul is worried about the new expansion plan of the management and is worried where the new workers would come from as he is already finding shortage of workers for the existing job. He has requested the management not to go for expansion immediately and look at improving and consolidating the existing set up. He has sent his request to Mr. Sachin Director - Operations. Mr. Sachin has gone through the request of Mr. Rahul and called a meeting of all the department heads and explained the situation to all concerned. The marketing manager has expressed very bullish prospect about the company's growth and said that the company should take advantage of growing economy and established brand image of the company and go for expansion. The finance manager also expressed that this will result in economy of scale for the products and will further increase the profitability of the products. Mr. Rahul again expressed his problems regarding availability of manpower as well as production control and effect on quality and productivity.

The Marketing manager asked the Production manager about the option of outsourcing. Mr. Rahul is skeptical about the outsourcing option as he felt that the outside agency will always charge more as he will try to make his profit as well and is worried about the possible problems of deliveries. Mr. Sachin asked the Mr. Saurav who is the Purchase manager about his views. He said that since the suppliers would also be interested in doing the business, they would not like to delay as with delay they also incur loss. The Finance manager said that we can look at cost comparison for buying against in house manufacturing.

After listening to all the views, Mr. Sachin told Mr. Rahul to work out the cost of production for future sales as per the forecast given by the Marketing department. He also told Mr. Saurav to collect the details of the future requirements to get the purchase cost details for few components of the valve. Mr. Rahul and Mr. Saurav have collected their data and they have presented the data in the meeting called by Mr. Sachin to review the plan.

First the marketing head Mr. Gautam presented his market forecast and then Mr. Rahul presented his report and explained the details as follows. The average cost of all varieties of valves are as below:

- 1. One supervisor with monthly salary of Rs. 50000 with expected increase of 10 % per year. To look after production of 3 varieties of valves they would need 2 supervisors.
- 2. Direct wages of worker as Rs. 40 per unit. With 10 % increase in second year, no change in 3rd year and increase of 10 % every subsequent year.
- 3. Material cost of Rs. 140 per unit with an increase of 10 % every year.
- 4. Power and fuel cost of Rs. 12 per unit with increase of 10 % every year.
- 5. Indirect labor as 50 % of direct labor.
- 6. Packaging Cost per unit is Rs. 10 per unit with 5% increase every year.
- 7. They need to buy a new machine with a cost of Rs. 150 lacs with useful life of 8 years.

Mr. Saurav explained his details as follows: The average cost of all varieties of valves quoted by third party vendor are as below:

- 1. Component price from supplier at Rs. 175 for the first 2 years with an increase of 10 % every subsequent year
- 2. Cost of assembly per valve would be 50 per unit for the first year with an increase of 7.5% every subsequent year.
- 3. Transportation cost of Rs. 15 per unit for the first year with increase of Rs. 2.50 every subsequent year.
- 4. Packaging Cost quoted by supplier is Rs. 12 per unit which remains unchanged in 2nd year and increase of 5% each year thereafter.
- 5. Inventory cost (storage cost) as 5 % per year of the basic material cost.

The Marketing manager has given the sales forecast for next 5 years as follows:

00000	250000
	200000
50000	200000
25000	150000
75000	600000
_	5000 5000

#### Questions:

- 1. Based on this data, is it economical for ABC Ltd.to go for buying the product from market or manufacturing in house.
- 2. What other factors should ABC Ltd. look at for making this decision?

#### Possible Solutions

1. Below table gives comparison and analysis of in house cost and outsourcing cost.

Cost of Manufacturing addit	ional quanti	ity inhouse				Figs Rs.
TAR .	1	2	3	4	- 5	
Qty per Year	225,000	325,000	415,000	475,000	600,000	
Plant Normal Capacity	100,000	100,000	100,000	100,000	100,000	
Additional Qty New Plant	125,000	225,000	315,000	375,000	500,000	
Material Cost / Unit	140.00	154.00	169.40	186.34	204.97	
Labour Cost / Unit	40.00	44.00	44.00	48.40	53.24	
Indirect Labour Cost / Unit	20.00	22.00	22.00	24.20	26.62	
Packing Cost / Unit	10.00	10.50	11.03	11.58	12.16	
Power & Fuel Cost / Unit	12.00	13.20	14.52	15.97	17.57	
Total Variable Cost / Unit	222.00	243.70	260.95	286.49	314.56	
Total Variable Cost / Year	27,750,000	54,832,500	82,197,675	107,433,094	157,279,131	429,492,400
Supervisor Salary / Year	1,200,000	1,320,000	1,452,000	1,597,200	1,756,920	7,326,120
Depreciation of Machine Year	1,875,000	1,875,000	1,875,000	1,875,000	1,875,000	9,375,000
Total Cost / Year	30,825,000	58,027,500	85,524,675	110,905,294	160,911,051	446,193,520
Qutsourcing Agency Procure	ment Cost o	of additiona	quantity		lannannan na n	Figs Rs.
<b>TAR</b>	2	2	3	9	9	nee)
Qty per Year	125,000	225,000	315,000	375,000	500,000	
Material Cost / Unit	150.00	150.00	165.00	181.50	199.65	
Assembly Cost / Unit	50.00	53.75	57.78	62.11	66.77	
Packaging Cost / Unit	12.00	12.00	12.60	13.23	13.89	
Transport Cost	15.00	17.50	20.00	22.50	25.00	
Inventory Storage Cost	7.50	7.50	8.25	9.08	9.98	
Total Variable Cost / Unit	234.50	240.75	263.63	288.42	315.30	
Total Cost / Year	29,312,500	54,168,750	83,043,844	108,157,441	157,648,729	432,331,264
Net Savings	1,512,500	3,858,750	2,480,831	2,747,852	3,262,323	13,862,256

Quite clearly, we can see there is a net saving of Rs. 1,38,62,256 by outsourcing the manufacturing of additional valve quantity to job worker and it is financially viable solution.

2. Even if the cost would have been same for both manufacturing in house as well as cost of procurement from job worker, we would have still gone for purchasing the product from the supplier. In case cost is higher for procurement little bit as compared to manufacturing in house, it is better to go for buying from outside as it gives better flexibility and risk is less even if the forecast goes wrong and the ultimate demand turns out to be lower than forecasted demand. Generally, whether we should go for in house manufacturing or outsourcing, we should consider following factors.

The factors generally influence make or buy decisions are:

- a. Relative economics
- b. In-house capacity currently available
- c. The need for control or secrecy
- d. Advantages of access to supplier knowledge and skill
- e. An opportunity to maintenance a robust supplier
- f. The relative risk involved
- g. Capital investment versus expenses for tax purposes

- h. Degree of scope definition available
- i. Affects uncertainty and risk
- j. Overall degree of technical, cost and schedule risk
- k. Type or complexity of the requirements
- l. Confidentiality of the process
- m. What will be the contractor's entire responsibility?
- n. Urgency of the deliverables
- o. Contractor's capacity to perform
- p. And/or extent of subcontracting
- q. How long have we got for execution to customer?
- r. Affects the pace of the work
- s. Extent of price competition
- $t. \quad Contractor's \ accounting \ systems$
- u. Control and procedure contractors has at their place
- v. In-house capacity utilization to absorb overheads
- w. Statutory approvals if any needed

Careful evaluation of these factors is required to arrive at final decision. It is very important for any company to evaluate this factors before make or buy decision to make sure risks are taken minimal and opportunity doesn't get missed out.



### Putting a value on Start up

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Union Budget 2019-20 was presented by Hon. Finance Minister Nirmala Sitaran, wherein budget proposals were focused on boosting Start Up's in India.

In a breather for Startups, Govt. has announced No 'Angel Tax' Scrutiny from the Income Tax Dept. for Angel Investors as well as Startups. In this scenario it is important for finance Professionals to understand the tricky & challenging process of Start Up Valuation.

### What Is a Startup

A startup company is a new business that is potentially fast growing and aims to fill a hole in the marketplace by developing and offering a new and unique product, process, or services.

Startup companies need to receive various types of funding in order to rapidly develop a business from their initial business model that they can grow and build up.

### Difference Between Startup Valuation and Mature Business Valuation

Start Up valuation Business valuation is never straightforward for any company. For startups with little or no revenue or profits and less-than-certain futures, the job of assigning a valuation is particularly tricky. For mature, publicly listed businesses with steady revenues and earnings, normally it's a matter of valuing them as a multiple of their earnings before interest, taxes, depreciation, and amortization (EBITDA) or based on other industry specific multiples.

But it's a lot harder to value a new venture that's not publicly-listed and may be years away from sales.

If you are trying to raise capital for your start-up company, or you're thinking of putting money into one, it's important to determine the company's worth. In my earlier article I have summarised Unicorn Valuation. But for Startup's its much different & unique methods are used to value the businesses.

### What determines a startup value?

### **Positive Factors**

- Traction One of the biggest factors of proving a valuation is to show that your company has customers. If you have 100,000 customers you have a good shot at raising 1 million.
- **Reputation** If a startup owner has a track record of coming up with good ideas or running successful businesses, or the product, procedure or service already has a good reputation a startup is more likely to get a higher valuation.
- **Prototype** Any prototype that a business may have that displays the product/service will help.
- **Distribution Channel** Where a startup sells its product is important, if you get a good distribution channel the value of a startup will be more likely to be higher.
- Hotness of Industry If a particular industry is booming
  or popular (like mobile gaming) investors are more likely
  to pay a premium, meaning your startup will be worth more
  if it falls in the right industry.
- Revenues More important is revenue to business rather than consumers but revenue streams like charging users will make a company easier to value.

• **Supply and Demand** - If there are more business owners seeking money than investors willing to invest, this could affect your business valuation. This also includes a business owner's desperation to secure an investment, and an investor's willingness to pay a premium.

### **Negative Factors**

- **Poor Industry** If a startup is in an industry that has recently shown poor performance, or may be dying off.
- Low Margins Some startups will be in industries, or sell products that have low-margins, making an investment less desirable.
- Competition Some industry sectors have a lot of competition, or other business that have cornered the market. A startup that might be competing in this situation is likely to put off investors.
- Management Not Up To Scratch If the management team of a startup has no track record or reputation, or key positions are missing.
- **Product** If the product doesn't work, or has no traction and doesn't seem to be popular or a good idea.
- **Desperation** If the business owner is seeking investment because they are close to running out of cash

### **Funding Stages**

Because startups typically go through a series of 'funding stages' their valuations can differ after each round of funding, and typically they want to show growth between each round, the usual funding stages are as follows,

- Seed Funding Typically known as the 'friends and family'
  round because it's usually people known to the business
  owner who provide the initial investment. But, Seed funding
  can also come from someone not known to the founder called
  an 'Angel Investor'. Seed Capital is often given in exchange
  for a percentage of the equity of the business, usually 20%
  or less
- 2. **Round A Funding** This is the stage that venture capital firms usually get involved. It is when startups have a strong idea about their business and product and may have even launched it commercially. The Round A funding is typically used to establish a product in the market and take the business to the next level, or to make up the shortfall of the startup not yet being profitable.
- 3. **Round B Funding** The startup has established itself but needs to expand, either with staff growth, new markets or acquisitions.
- 4. **Debt Funding** When a startup is fully established it can raise money through a loan or debt that it will pay back, such as venture debt, or lines of credit from a bank.
- 5. **Mezzanine Financing and Bridge Loans** Typically the last round of funding where extra funds are acquired in bridge financing loans in the run up to an IPO, acquisition, management buyout, or leveraged buyout. This is usually

short-term debt with the proceeds of the IPO or buyout paying it back.

- 6. Leveraged Buyout (LBO) A Leveraged Buyout is the purchase of a company with a significant amount of borrowed money in the form of bonds or loans instead of cash. Usually the assets of the business being purchased are used as leverage and collateral for the loan used to purchase it.
- 7. **Initial Public Offering (IPO)** -An Initial Public Offering is when the shares of a company are sold on a public stock exchange where anyone can invest in the business. IPO opening stock prices are usually set with the help of investment bankers who help sell the shares.

### Do I Need To Use Startup Valuation Methods?

Whilst it is helpful to have a valuation of a startup in order to help investors offer the right amount of money needed it isn't necessarily the dominant reason why an investor will invest in a startup.

Quite often convincing an investor that a startup has value is more about negotiating, convincing and being passionate and bold about the business idea. Whilst there's no concrete evidence of a startup valuation there is evidence that you, as a business owner will do everything you can to make the business work.

As a result investors will sometimes invest in people rather than the business idea.

### Why Startup Valuation Methods are Important?

When an early stage investor is trying to decide if they should make an investment into a startup he will guess what the likely exit size will be for that startup of a type, and in a specific industry. If a business owner has used methods to show their startup is worth a high amount that investor is likely to invest more into the company.

Using these methods or frameworks is also important because startup companies lack reliable past performance and predictable future performance that most established businesses use to estimate their value so having a way to guess a valuation is useful, even if it is all guesswork and predictions. Because of this guesswork, an estimation has be to be used, which is why several startup valuation method frameworks have been invented to help a startup business more accurately guess their valuation.

### The Most Popular Startup Valuation Methods

There are many different methods used in deciding on a startup's valuation, while all of them differ in some way, they are all good to use.

- Venture Capital Method
- Berkus Method
- Scorecard Valuation Method
- Risk Factor Summation Method
- · Valuation By Stage Method
- Cost-to-Duplicate Method
- Market Mutiples Method
- Discounted Cash Flow Method
- Comparables Method
- The Book Value Method
- First Chicago Method

#### **Venture Capital Method**

The Venture Capital Method (VC Method) is one of the methods for showing the pre-money valuation of pre-revenue startups. The concept was first described by Professor Bill Sahlman at Harvard Business School in 1987.

It uses the following formulas:

- Return on Investment (ROI) = Terminal (or Harvest) Value
   Post-money Valuation
- Post-money Valuation = Terminal Value ÷ Anticipated ROI

Terminal (or Harvest) value is the startup's anticipated selling price in the future, estimated by using reasonable expectation for revenues in the year of sale and estimating earnings.

If we have a tech business with a terminal value of Rs.4 million with an anticipated return of investment of 20X and they need Rs.100,000 to get a positive cash flow we can do the following calculations.

- Post-money Valuation = Terminal Value ÷ Anticipated ROI = Rs. 4 million ÷ 20X
- Post-money Valuation = Rs.200,000
- Pre-money Valuation = Post-money Valuation Investment = Rs. 200,000 Rs.100,000
- Pre-money Valuation = Rs. 100,000

#### **Berkus Method**

The Berkus Method assigns a range of values to the progress startup business owners have made in their attempts to get the startup off of the ground. The following table is the up to date Berkus Method:

If Exists:	Add to Company Value up to:
Sound Idea (basic value)	1/2 million
Prototype (reducing technology risk)	1/2 million
Quality Management Team (reducing execution risk)	1/2 million
Strategic relationships (reducing market risk)	1/2 million
Product Rollout or Sales (reducing production risk)	1/2 million

### **Scorecard Valuation Method**

The Scorecard Valuation Method uses the average pre-money valuation of other seed/startup businesses in the area, and then judges the startup that needs valuing against them using a scorecard in order to get an accurate valuation

- The first step is to find out the average pre-money valuation of pre-revenue companies in the region and business sector of the target startup
- The next step is to find out the pre-money valuation of prerevenue companies using the Scorecard Method to compare.
   The scorecard is as follows,
  - 1) Strength of the Management Team 0-30 %
  - 2) Size of the Opportunity 0-25 %
  - 3) Product/Technology 0-15 %
  - 4) Competitive Environment 0-10 %
  - 5) Marketing/Sales Channels/Partnerships 0-10 %
  - 6) Need For Additional Investment 0-5 %
  - 7) Other 0-5 %

The final step is to assign a factor to each of the above qualities based on the target startup and then to multiply the sum of factors by the average pre-money valuation of pre-revenue companies

### **Risk Factor Summation Method**

The Risk Factor Summation Method compares 12 elements of the target startup to what could be expected in a fundable and possibly profitable seed/startup using the same average premoney valuation of pre-revenue startups in the area as the Scorecard method. The 12 elements are,

- 1) Management
- 2) Stage of the business
- 3) Legislation/Political risk
- 4) Manufacturing risk
- 5) Sales and marketing risk
- 6) Funding/capital raising risk
- 7) Competition risk
- 8) Technology risk
- 9) Litigation risk
- 10) International risk
- 11) Reputation risk
- 12) Potential lucrative exit

Each element is assessed as follows:

- +2 = very positive for growing the company and executing a wonderful exit
- +1 = positive
- 0 = neutral
- -1 = negative for growing the company and executing a wonderful exit
- -2 = very negative

The average pre-money valuation of pre-revenue companies is then adjusted positively by for every +1 and negatively by for every -1

### Valuation by Stage

Finally, there is the development stage valuation approach, often used by angel investors and venture capital firms to quickly come up with a rough-and-ready range of company value. Such "rule of thumb" values are typically set by the investors, depending on the venture's stage of commercial development. The further the company has progressed along the development pathway, the lower the company's risk and the higher its value. A valuation-by-stage model might look something like this:

Estimated Company Value in Rs.	Stage of Development
25,00,000 - 50,00,000	Has an exciting business idea or business plan
50,00,000 - 10 million	Has a strong management team in place to execute on the plan
10 million - 20 million	Has a final product or technology prototype
20 million - 50 million	Has strategic alliances or partners, or signs of a customer base
50 million and up	Has clear signs of revenue growth and obvious pathway to profitability

Again, the particular value ranges will vary, depending on the company and, of course, the investor. But in all likelihood, start-ups that have nothing more than a business plan will likely get the lowest valuations from all investors. As the company succeeds in meeting development milestones, investors will be willing to put assign a higher value.

Many private equity firms will utilize an approach whereby they provide additional funding when the firm reaches a given milestone. For example, the initial round of financing may be targeted toward providing wages for employees to develop a product. Once the product is proved to be successful, a subsequent round of funding is provided to mass produce and market the invention.

### Cost-to-Duplicate

As the name implies, this approach involves calculating how much it would cost to build another company just like it from scratch. The idea is that a smart investor wouldn't pay more than it would cost to duplicate. This approach will often look at the physical assets to determine their fair market value.

The cost-to-duplicate a software business, for instance, might be figured as the total cost of programming time that is gone into designing its software. For a high-technology start-up, it could be the costs to date of research and development, patent protection, prototype development. The cost-to-duplicate approach is often seen as a starting point for valuing startups, since it is fairly objective. After all, it is based on verifiable, historic expense records.

The big problem with this approach - and company founders will certainly agree here - is that it doesn't reflect the company's future potential for generating sales, profits and return on investment. What's more, the cost-to-duplicate approach doesn't capture intangible assets, like brand value, that the venture might possess even at an early stage of development. Because it generally underestimates the venture's worth, it's often used as a "lowball" estimate of company value. The company's physical infrastructure and equipment may only be a small component of the actual net worth when relationships and intellectual capital form the basis of the firm.

### **Market Multiples**

Venture capital investors like this approach, as it gives them a pretty good indication of what the market is willing to pay for a company. Basically, the market multiple approach values the company against recent acquisitions of similar companies in the market.

Let's say mobile application software firms are selling for five-times sales. Knowing what real investors are willing to pay for mobile software, you could use five-times multiple as the basis for valuing your mobile apps venture while adjusting the multiple up or down to factor for different characteristics. If your mobile software company, say, were at an earlier stage of development than other comparable businesses, it would probably fetch a lower multiple than five, given that investors are taking on more risk.

In order to value a firm at the infancy stages, extensive forecasts must be determined to assess what the sales or earnings of the business will be once it is in the mature stages of operation. Providers of capital will often provide funds to businesses when they believe in the product and business model of the firm, even before it is generating earnings. While many established corporations are valued based on earnings, the value of startups often has to be determined based on revenue multiples.

The market multiple approach, arguably, delivers value estimates that come closes to what investors are willing to pay. Unfortunately, there is a hitch: comparable market transactions can be very hard to find. It's not always easy to find companies that are close comparisons, especially in the start-up market. Deal terms are often kept under wraps by early stage, unlisted companies - the ones that probably represent the closest comparisons.

### Discounted Cash Flow (DCF)

For most startups - especially those that have yet to start generating earnings - the bulk of the value rests on future potential. Discounted cash flow analysis then represents an important valuation approach. DCF involves forecasting how much cash flow the company will produce in the future and then, using an expected rate of investment return, calculating how much that cash flow is worth. A higher discount rate is typically applied to startups, as there is a high risk that the company will inevitably fail to generate sustainable cash flows.

The trouble with DCF is the quality of the DCF depends on the analyst's ability to forecast future market conditions and make good assumptions about long-term growth rates. In many cases, projecting sales and earnings beyond a few years becomes a guessing game. Moreover, the value that DCF models generate is highly sensitive to the expected rate of return used for discounting cash flows. So, DCF needs to be used with much care

### **Comparables Method**

This method is to literally look at the implied valuations of other similar startups, factoring in other ratios and multipliers for things that may not be similar between the two businesses.

For example, if Startup A is acquired for 7.5Cr.and its website had 250,000 active users; you can estimate a valuation between the price of the startup and the number of users, which is Rs.300/user.

Startup B might have 125,000 users which would then allow it to use the same multiple of Rs.300/user to reach a valuation of Rs.3.75Cr.

### The Book Value Method

This method is based solely on the net worth of the company. i.e. the tangible assets of the company. This doesn't take into account any form of growth or revenue, and is usually only applied when a startup is going out of business.

#### First Chicago Method

This method factors in the possibility of a startup really taking off, or really going badly. To do this it gives a business owner three different valuations

- Worst case scenario
- Normal case scenario
- Best case scenario

### Do Startups Need A High Valuation To Be Successful?

The success of a startup doesn't rely on it receiving a high valuation, and in some cases it is better to not receive a high valuation. When you get a high valuation for your seed round, you need a higher one for the next funding round, meaning that a lot of growth is needed between rounds.

A good general rule to follow is that within 18 months a startup will need to show that it grew ten times. This is usually achieved with one of the two following strategies.

- Go big or go home A startup can raise as much money as
  possible at the highest valuation possible, spending that
  money to encourage as much growth as quickly as possible.
  If successful a startup will have a much bigger valuation in
  the next funding round and often, the 'Seed' round will pay
  for itself.
- 2. **Pay as you go** a startup would only raise money that it needs, spending as little as possible whilst aiming for steady growth

#### Common mistakes

· Assuming a value is permanent or always right

When it comes down to it, a startup is worth what an investor is willing to invest. A startup business owner might disagree with an investor's valuation because their own valuation is different.

But as these valuations are based on predictions a startup owner should not assume that the value is permanent or right.

Assuming a value is straightforward

Business valuation is never straightforward for any company. It is constantly changing and there are so many factors. For a startup this is even truer because there's nothing to go on.

#### Conclusion

VCs have a certain vocabulary, and it can have a big impact on your valuation. First of all, you need to understand the concepts of "premoney" and "postmoney." Premoney is the valuation before the investment is made, and postmoney is the sum of the premoney valuation and the investment.

Knowledge of other businesses in an industry and geographical location and what they are valued at is key to figuring out the value of a startup in the same industry and location, that is why several of the startup valuation methods include this.

A business owner should not stop with one approach. Angel investors and business owners will want to use several methods because no single method is useful all of the time. Multiple methods also help a startup determine an average valuation.

Ideally, a business owner should use several startup valuation methods to get the most accurate valuation possible. A business owner will want all of the valuations they come to from each of the methods to be within a sensible average

Finding this average valuation is important because none of the startup valuation methods are scientifically or mathematically accurate; they are all based on predictions and guesswork.

It is extremely hard to determine the accurate value of a company while it is in its infancy stages as its success or failure remains uncertain. There's a saying that startup valuation is more of an art than a science. There is a lot of truth to that. However, the approaches we've seen help to make the art a little more scientific.

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## Cleaner and greener mobility infrastructure is Metro Rail

### CMA Mukeshkumar Kaka

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### Introduction

Transportation plays an important role in the development of a country and is an indicator of social and cultural life of its citizens. Status of people in a state with respect to Education, Employment and Health gets affected by prevailing transportation system. So it is very important for any city to have an effective public transportation system and the same has to be managed to face upcoming, future challenges and to ensure effectiveness in their operations.

The metro railway services which has come as a boon for the people of the India is expanding in leaps and bounds. Growing cities, growing population and growing traffic has invariably called for a shift from private modes of conveyance to public transport. A glance at the world's developing nations indicates that well planned Mass Rapid Transit Systems MRTS exist successfully. India is looking to create a world class infrastructure with its existent Kolkata and Delhi Metros with the addition of Mumbai, Bengaluru, Hyderabad, Chennai, Jaipur, Noida, Gurugram, Ahmedabad Navi Mubmai, Lucknow, and Kochi metros in the next few years while proposals for MRTS for various cities viz, Delhi Metro Phase 4 and extension , Varanasi, Meerut, Agra, Kanpur, Guwahati, Vishakhapatnam, Vijaywada, Chandigarh, etc. being chalked out. The Chennai metro Rail is a rapid transit system serving the city of Chennai, Tamil Nadu, India. Chennai Metro will be the 3rd largest metro system in India after Delhi Metro and Kolkata Metro completion. The Metro rail Asia - Asia's premier rail event with a special focus on India proves to be a high-value networking and knowledge-sharing of key metro authorities and operators with discussions over India's extensive metro growth. Metro trains is the back bone of any city Public Transport System. The main advantages of Metro Train are: It takes cars and buses off the road. leading to less pollution and traffic congestion.

A **Metro Train** is named as **"Metro"** because it is most suitable for the **Metro** Cities or metropolitan area which have large population. It works in Metro cities with high capacity and freqency. Metro is a short form of Metropolitan. meaning a city where all states of people live. like Delhi Bombay Chennai etc.. The trains run metro cities named after that. Cosmopolitan means people from different countries live along with locals. Not all **Metro** Systems use **Metro** in their names, like in Toronto it is named as "Toronto Rapid Transit" and in Beijing it is named as "Beijing Subway".

The word metropolitan comes from metropolis, which in Greek means mother city, made up of m?t?r meaning mother, and polis meaning city. A person who lives in a metropolis, or city, is also called a metropolitan. And metro runs in metropolitan cities that's why it is called "metro"

A metropolitan area, sometimes referred to as a metro area or commuter belt, is a region consisting of a densely populated urban core and its less-populated surrounding territories, sharing industry, infrastructure, and housing. The Constitution (seventy-fourth Amendment) Act, 1992 defines a metropolitan area in India as, an area having a population of ten lakhs or

more, comprised in one or more districts and consisting of two or more Municipalities or Panchayats or other contiguous areas, specified by the Governor by public notification.

A metro is a train that is specifically designed to run in metropolitan cities while local train are designed to connect the distances within the city and its suburbs areas.

The earliest metro system, the London Underground, first opened as an "underground railway" in 1863; its first electrified underground line opened in 1890, making the London Underground the world's first metro system.

Kolkata Metro is the oldest operated Metro in India. It is the only metro which functions directly under the Indian Railways. It became the 17th zone of the Indian Railways. Kolkata Metro's foundation was laid in the year 1972 and it was first opened for commercial services in 1984. There are 24 stations and it is operational for 27.22 kilo-metres.

India all set to get its first underwater metro in **Kolkata**. India is all set to get its first underwater metro in **Kolkata** which will pass through a tunnel that is several feet under the **Hooghly**.

The first rapid transit system in India is the **Kolkata** Metro, which started operations in 1984. The **Delhi** Metro has the largest network in the entire country.

Richard Trevithick invented Metro train as he also made the 1st working train. We can also credit George Stephenson who also had a great role in the invention of Trains.

The Metro railway system and service are operational in 13 cities in India. These are Kolkata, Delhi, Bengaluru, Gurugram, Mumbai, Chennai, Jaipur, Kochi, Hyderabad, and Lucknow. The Kolkata Metro rail is the oldest metro service in the country. There are currently 13 operational rapid transit (also called 'metro') systems in 18 cities in India. As of March 2019, India has 638.91 kilometres (397.00 miles) of operational metro lines and 496 stations.

The **METRO** consists of microcontroller with the RF receiver and the voice recorder chip with speaker .The whole system is attached to the vehicle (**Train**). When the project is powered the train moves, until it encounters a RF card placed beneath the track. The encoded RF transmitters are placed in the railway stations.

Generally the speed of metro trains in India Maximum speed is 80km/h (50mph), with a 20-second dwell time at stations. Though operating rules currently limit trains to 59 mph (95 km/h), they have a maximum speed of 75 mph (121 km/h), and average 33 mph (53 km/h), including stops. Metro trains are local trains that travel short distances (< 50 Km per line). They use elevated or underground tracks. They never travel above 80 Km/h speed.

THREE PHASE SLIP RING INDUCTION MOTOR has been used in DELHI METRO. DC series motor is ideal for traction but the maintenance cost of which is very high also needs the conversion and smoothening of AC voltages.IM has less maintenance, high starting torque, cheap etc.

Metro trains do a crossover at the end of the line. The conductor drives the train into the station at the end of the line and crosses

over. Then, s/he walks to the other end of the train, which is now the front end, and crosses over again to go the other direction. In 1845, along with Sir Jamsetjee Jejeebhoy, Hon. Jaganath Shunkerseth (known as Nana Shankarsheth) formed the Indian Railway Association. Lord Dalhousie is known was the father of Indian Railways

Delhi Metro is the world's 12th longest metro rail system in length and 16th largest in daily riders; serving Delhi and its suburbs-Gurugram, Faridabad, Ghaziabad, Noida & Greater Noida in the NCR. It is the second oldest metro in India after Kolkata Metro.

The largest and most complex metro station in the world is the Paris Métro-RER station Châtelet-Les Halles in France. The metro station with the highest elevation above ground in the world is New York City's Smith-Ninth Streets station of the New York City Subway in the United States.

Bangalore - Namma Metro system Bangalore India is the biggest metro station in Asia - Newly built metro station in Bangalore, Majestic It's biggest Metro station in Asia (Deccan Chronical).

The Metro Rail System has proven to be most efficient in terms of energy consumption, space occupancy and numbers transported. High-capacity carriers - very high volumes of peak hour peak direction trips. Eco-friendly - causes no air pollution, much less sound pollution. It is the largest operational metro in India and has 173 stations. The Delhi Metro Rail Corporation (DMRC) has an airport express line and seven other metro lines.

### Importance of metro rail in India

- As a country that is rapidly developing and a global leader in the implementation of the Climate change agreement, India is conscious of its carbon emissions and air-quality challenges.
- The metro is one of the ways to reduce traffic congestion in cities. Also, as more people switch to the metro as the preferred mode of public transport, petrol and diesel consumption will also reduce. Ultimately, the metros aim to be a model mode of transport contributing to a low-carbon, climate-friendly future.
- The Centre has issued mandatory parameters for electrical components used in metro-rail systems, like lifts, escalators, tunnel ventilation and environmental control system. GoI ?The notification makes it mandatory to use 50 per cent local content in compliance to public procurement, straightway promoting Make in India.
- This initiative promoting Make in India will help reduce the cost incurred for procurement (primarily design and validation), inventory management and spare availability and enable interchange ability and reliability.
- The capabilities of ancillary industries will also improve as the requirement for standard product/components/LRU will be higher. OEMs will undertake improvements in design and focus on cost-optimisation to comply with standard procedure and safety requirements to secure compatibility and interface consistency
- Metro-rail prompting business opportunities for the support industry- As we all know that Metro Rail has to installed various metro-rail systems growing, the scope of business and opportunities for various components like lifts, escalators, elevators, tunnel ventilation systems and environment control systems is also expanding. So, automatically, there is a huge demand for such component providers and support industries. Accordingly, the opportunity for manufacturers and suppliers during project

execution and for operation and maintenance of installed systems exist. It is evident that supporting industries are also set to cater to the growing demand for metro projects.

### Success of metro-rail in India

Metro-rail projects are coming up rapidly, which is explained by India's on going urban transition. We expect 500 million new urban dwellers by 2050: such growth is unprecedented in speed and scale. As more people move to cities, pressure on existing public transport systems-mainly public buses-increases, and the efficiency and quality of the service drops. Metros provide people with an efficient and comfortable alternative. In Tier I and Tier-II cities, this public transport is especially relevant.

Metros in India have improved connectivity, increased accessibility for people living further from city centres, and reduced travel time. Recent drives to introduce technological innovations and promote integration with other modes of transport under the new Metro Rail Policy have further improved the quality of services proposed. With this and the growing demand for metro rail, it is safe to say metro-rail projects in India have been quite successful.

### Financial Aspects of Metro Rail Project.

A Unified Metropolitan Transport Authority (UMTA) as a statutory body is the need of the hour. This authority is envisioned to have a comprehensive mobility plan for the city, to effect coordination among various urban transport agencies and manage the district urban transport fund (DUTF).

This makes Metro planning critical and even challenging. Metro rail systems should be driven by city governments and they should be stakeholders, even if it was a minority stake. The policy emphasizes financial viability and 14% internal rate of return (IRR) for approving a new Metro rail project. This is difficult to achieve without a generous subsidy from the government. At the same time, the policy expects pricing to be competitive so that public transport is encouraged. Avenues of mobilizing capital at reasonable cost should be opened for Metro rail projects. State governments should encourage implementing agencies to raise cheaper long-term debt by allowing them to issue corporate debt bonds and earmarking revenue from betterment levies.

### **Projects supported**

JICA has been supporting projects in Delhi, Bengaluru, Chennai, Kolkata, Mumbai and Ahmedabad. In 2018, JICA signed an official development assistance (ODA) loan of Rs 16 billion for the third tranche of Kolkata metro between Howrah Maidan to Salt Lake Sector V, including an underwater section, which is first of its kind in India. A Rs 33 billion loan for Delhi Metro Phase 3 and Rs 43 billion for the first tranche of Chennai Metro Phase 2 were also signed for building a metro-rail system.

To assist India in building its metro network, JICA has extended a cumulative loan amount of Japanese Yen 1.3 trillion (about Rs 870 billion) for six cities: Delhi, Bengaluru, Chennai, Kolkata, Mumbai and Ahmedabad

### City-wise distribution of approved metro projects

We may review 29 the Metro Rail Projects in following category decided on stages of Metro Rail Projects. There are 4 projects are fully Operational and 9 projects are Partly Operational. Further, There are 2 projects are Under implementation and 2 projects are Under implementation. However 6 projects are Recently approved in spite of this 8 DPR of Projects are under approval stage. The details of the above projects wise length, Approved projects and status etc. are shown under different tables.

Sr.No	Projects	Length in KM	Approved Project Cost (Rs. In Billion.)	Status of Metro projects
1	Delhi*	411	1,100.25	Operational
2	Noida	29	55.03	Operational
3	Gurugram	11	36.35	Operational
4	Mumbai	197	820.78	Partly Operational
5	Navi Mumbai	11	30.64	Partly Operational
6	Kolkata	135	213.90	Operational
7	Bengaluru	114	402.50	Partly Operational
8	Hyderabad	72	141.32	Partly Operational
9	Chennai	54	183.70	Partly Operational
10	Pune	54	175.44	Under implementation
11	Nagpur	38	86.80	Under implementation
12	Ahmedabad	36	107.73	Partly Operational
13	Indore	32	75.01	Recently approved
14	Patna	31	133.66	Recently approved
15	Bhopal	28	69.41	Recently approved
16	Kochi	26	51.82	Partly Operational
17	Lucknow	23	69.28	Partly Operational
18	Jaipur	12	31.49	Partly Operational
19	Surat*	40	120.20	Recently approved
20	Agra*	29	83.80	Recently approved
21	Kanpur*	32	110.76	Recently approved

### - Source: Ministry of Housing & Urban Affairs (MoHUA)

### Metro-rail projects in DPR/approval stage

Sr.	City	Estimated Cost
No.		(Rs. Billon)
1	Delhi Metro Phase 4 & Extension	644.63
2	Uttar Pradesh (Varanasi, Meerut,	
	Agra, Kanpur)	631.32
3	Guwahati	180.20
4	Andhra Pradesh (Visakhapatnam,	
	Vijayawada)	165.59
5	Chandigarh	139.09
6	Mumbai - Line 2A, Line 7	118.02
7	Kerala (Thiruvananthapuram,	
	Calicut, Kochi)	89.68
8	Others	24.00

(source: ICRA research, MoUD, Metro websites.)

### Critical Issues - Execution of Metro Rail Project

Impact of metro rail construction work zone on traffic environment

Implementation of metro rail projects paves way to the construction activities and in this process long term construction work zones are inevitable. Long term work zones on urban roads lead to many problems such as reduction in capacity , increase the travel time delays, queue length, fuel consumption, number of forced merges, and roadway accidents which lead to unaccounted economic losses. Total economic losses is calculated to be around numbers of Million of Rs./km/year for elevated metro construction in the given site. With such huge economic loss it becomes imperative to have systematic work zone scheduling and traffic management techniques so as to reduce the impacts of metro rail construction work zones.

### Management and planning under complexities of metro construction

Regarding the rapid development of cities, underground constructions at urban regions, such as metro construction, have been largely used for extending daily human life into underground spaces. Therefore, the recognition of the complex elements of a metro construction can play a significant role in its management and planning. As metro projects are also urban underground projects, both internal and external issues are studied and their impacts on project management are discussed. It is concluded that exceptional differences in the managing and planning of these constructions is that combined internal and external complexities are carried out simultaneously.

### **Underground versus Elevated Corridor**

It is very serious to decide to opt for Underground or Elevated Corridor. Underground is costly than Elevated Corridor. The resident welfare Associations colonies Town planers etc. Stack holders opposed /against for elevated corridor for various responses. Viz., noise pollution, vibrations, adversely affect the aesthetics of the city, historical monuments etc.

It is not that the proportion of elevated corridors vis-à-vis underground corridors is high in India or any developing countries because the cost of their construction is less. In India, such as Mumbai, Bangalore, Hyderabad, Ahmadabad, Ludhiana, etc., the proportion of elevated corridors are likely to be significantly more than what has been or is being provided in Delhi due to similar reasons.

Moreover, as these metro rail corridors/projects are mostly public-funded projects, financed by the government, these projects cannot be provided unlimited financial support at the cost of other infrastructure projects. Thus, these metro rail projects always have to work with financial and budget

<sup>- \*</sup>Delhi Metro Phase 4, Agra, Kanpur, and Surat Metro were approved recently (Feb/March-2019)

constraints. Providing 1 km of underground section equals 2.5-3.0 km on the surface in terms of cost, which is equal to 1.5-2 km less metro rail corridor for every km of underground section due to budgetary constraints. This may result in a large population of a city still being without a reliable, comfortable and environment-friendly public transport system such as a metro rail system. Thus, elevated versus underground corridor issues can be resolved keeping in view technical considerations only, whereas other issues like availability of funds/resources, safety issues along with socio-economic considerations, although very important, should come later while arriving at the final solution/selection of the corridor.

### Clean Development Mechanism (CDM) Opportunities in MRTS Projects

Transportation projects involving improvement in vehicle fuel efficiency by introducing new technologies, changes in vehicle and/or fuel type, changing to less carbon intensive means of transport and reducing the frequency of transport activities are covered under CDM and are entitled for 'Carbon Credits' as per the Kyoto Protocol.

In fact, CO2 emission reduction from various MRTS projects like metro rail can also be utilised to earn 'Carbon Credits' by developing countries like India through the Clean Development Mechanism (CDM) as per the provisions of the Kyoto Protocol (1997), which became effective from the year 2005

### Challenges faced by metro-rail projects in the present day:

- Although the metro is a rail-based transport mode that is technically more advanced and sophisticated, the Government of India (GoI) considers it as state subject, whereas Railway is a central subject. GoI controls all technical parameters, safety certification and sanctioning powers but does not take the responsibility for losses and repayment of loans.
- The Central Government does have a Short -term vision or a sound and sustainable policy (the Metro Policy of August 2017 is short-sighted and restrictive) with regard to raising funds for metro construction, meeting operational losses or building up a managerial and technical framework to complete projects in time and within estimated costs.
- GoI considers private participation a must in all metro projects knowing-fully well that all PPP metro projects in the country have failed so far.
- There is no effort on the part of GoI to reduce unit costs of metro projects through tax concessions or higher equity participation.
- Metro projects are capital-intensive in nature, with a long construction period and increase in ridership, requiring several years. All these issues make debt-servicing a challenge. Accordingly, metro development corporations have been exploring long-term concessional financing. Multilateral development banks like JICA, ADB and KFW have played an active role in financing several projects across Indian cities.
- Dedicated land or RoW for construction of projects; reduction of delay in clearance of site for construction; creating space to handle equipment and materials; research on indigenisation of metro technology and products; and enabling transport and traffic management policies to enable multi-modal integration.
- Land acquisition as the main challenge while executing mammoth infrastructure projects within city limits.
- This project faced multiple challenges in the beginning related to land and rehabilitation, shifting of utilities, coordination with multiple agencies for various approvals,

- social and environmental issues and issues related to public perception.
- This entire project is technically challenging. So, there are some interface and design-related challenges that are being dealt with judiciously.
- During construction phase major issues are handling of traffic and geographic condition of the already existing structure along with the lack of space available for handling of equipment and materials.
- The clause regarding the bank guarantee and other money related deposit details need to be more specific and how to be handled during crises and issues in general issues like termination of contract or change of contractor etc.
- Over-estimation of Traffic Demand Forecasts/Ridership Estimation - Financial viability of any transportation projects greatly depends upon the accuracy of traffic demand forecasts/ridership estimation. These forecasts not only provide a technical justification for these projects but also a guide and tool for their socio-economic and environmental appraisal vis-à-vis their projected/ estimated costs and benefits. In the context of metro rail projects, an over-estimation of the ridership figure leads to over-sizing and underutilisation of the infrastructure/ resources leading to over-investing in idle capacity resulting in financial mismanagement or crisis for the project. On the other side, an underestimation of traffic demand/ ridership estimation leads to chaos and inefficiency and ultimately a significant further investment as adding capacity to an existing facility is much more costlier than building the whole capacity/infrastructure in one go.
- Land/Property Acquisition and Resettlement and Rehabilitation (R&R) Related Issues - Metro cities of developing countries throughout the world are densely populated with little availability of land for such mega infrastructure project. Land/property acquisition has always been an integral part of any mega infrastructure developmental project. Efforts are always made to minimise the land/property acquisition as to minimise its socio-economic impacts. The land/property acquisition in some areas along the metro corridors sometimes becomes inevitable no other option related to alternate alignment requiring less R&R impacts is feasible due to technical reasons (including those related to ridership), environmental considerations and financial constraints. The issue of land/property acquisition is a pre-construction phase activity, for which proper socio-economic and R&R surveys need to be carried out to determine the project affected persons/families.
- Loss of Trees / Green Cover During the construction phase of metro rail projects, many times trees have to be cut, resulting in the loss of green cover along the metro rail corridors. Most of these trees are part of roadside/linear plantation on the median and/or on the sides of existing road(s). The loss of tree/green cover may cause microclimatic changes and affects the aesthetics of the area.
- Noise and vibration-related issues along the corridor(s) are one of the major issues which may be significant during both the construction as well as the operational phase of the project. During the construction phase, the use of heavy machinery and construction equipment may cause vibrations and also increase the ambient noise levels. Vibrations generated during the construction phase may have several adverse impacts, including cracks developed on the surrounding buildings which can have serious implications on the structural safety.
- Accidents During Construction Phase Ideally, no accidents during construction should take place. However,

during the construction of complex structures such as metro rail corridors, which involve the use of huge machinery and equipment, some freak fatal accidents are always a possibility. The accidents may occur due to human errors/ negligence, mechanical failure of machinery, design faults, use of low-quality construction materials and also due to man-made and natural disasters like earthquakes, flooding, fire and deliberate sabotage and terrorist activities. Development of a safety culture at all levels, close monitoring and supervision by trained engineers, proper designing of the structures and its verification by another independent agency, quality checks of the construction materials and 'no tolerance' towards the negligence can ensure a high level of safety during the construction period. Advanced technology should be used so that human exposure and faults arising due to human error can be avoided.

- Traffic Issues during Construction Phase -- Most of the metro rail corridors (especially elevated corridors) are being built along the existing roads or within the existing ROW of the roads. As a result, traffic needs to be diverted temporarily (or only a narrow width of the existing road is allowed to be used for traffic flow) for carrying out construction activities smoothly and to avoid any accident involving construction machinery/equipment. This diversion of road traffic further from the existing road corridors increases the traffic loads on the adjoining roads leading to congestion and traffic jams during peak hours during the construction phase of the project. The situation may be further aggravated during the monsoon season due to water logging problems at the project site. Traffic diversion plans, including barricading of the project site (that is, the portion of the existing road which needs to be taken over temporarily), needs to be implemented in consultation with traffic police and local authorities before the start of the construction activities. The public should also be made aware of these diversions/closures well in advance to avoid inconvenience.
- Property Development along the Metro Rail Corridors - Property development along the metro rail corridors and metro stations have always been a debatable issue and also generated arguments both in support as well as against it. While, many argue that organisations like DMRC in Delhi and similar organisations in other parts of the country, who have been entrusted the job of construction and operation of metro rail system(s), should not be allowed to venture into property development business like any other real estate agency/developers, when the land to these agencies have been given to them at concessional rates. It is also argued that these implementing agencies, which have been given land/property along the corridors on concessional rates, are focusing more on profit generation by the way of real estate development and commercial use of the land/space at metro stations to earn profiles like any other real estate developers/agency

### RISK MANAGEMENT of METRO RAIL.

Risk is always with any project. Metro is a very complex projects. Management has to lookout for the insurance to protect / mitigate the risk of the Projects. The risk to which each party is committed through the contract is to be clearly defined as well as understood so that disputes may not occur and the responsibilities will be based on the assignment spelled out in the contract. It is very important to managing commercial risks and responsibilities, such as those associated with construction, operation and financing.

The main risks involved in Metro Rail projects are:

- (1) Construction Risks.
- (2) Operating Risks
- (3) Market and Revenue Risks (4) Finance Risks
- (5) Legal Risks
- (6) Political Risks

#### **CONSTRUCTION RISKS**

A common cause of cost overrun stems from design changes and unforeseen weather conditions during the construction phase. The private sector typically bears primary responsibility for the construction uncertainties and attempts to cover it through insurance. The public sector may assume responsibility for risks under its control such as competing complementary facilities or allowing cost increases associated with major design changes.

#### **OPERATING RISKS**

Operating risks are the risks that emerge at the time of the operations of the project on the part of operator's default. It can also involve the risks like force majeure risks that are beyond the control of both the public and private partners, such as fire or earthquakes, or other non-political factors such as strikes and industrial disturbances that impair the project's ability to earn revenues. Sometimes private insurance is becoming available for catastrophic risks but generally public sector faced with the need to restructure the project if such disaster or problem occurs.

#### MARKET AND REVENUE RISKS

Demand uncertainty continues to be a major factor in most of the projects. Traffic and tariff levels may not be sufficient to cover all costs, including construction, operation and maintenance. The private sector fully depends upon the government for the handling of the traffic and revenue risks.

#### FINANCIAL RISKS:

Financial risk is the risk that project cash flows might be insufficient to cover debt service and then pay an adequate return on sponsor equity. Financial constraints like lack of longterm debt capital hinder the road development projects. Nonavailability of local or domestic finance markets may lead to the higher risks for road sector projects which need long-term

Currency risks involve the impact of exchange rate fluctuations on the value of domestic currency. It can subject to the convertibility as the operator may not be allowed to convert the local currency into the foreign currency.

Financial risks are best borne by the private sector but a substantial government risk sharing is required either through revenue or debt guarantees or through participation by state or multilateral development institutions.

#### **LEGAL RISKS:**

Regulatory risk stems from the weak implementation of regulatory commitments built into the contracts and the laws or other legal instruments that are relevant to the value of the transactions as it was originally assessed. The major risk lies on the part of the concessionaire like lack of power and capacity.

#### **POLITICAL RISKS:**

Political risk concerns government actions that affect the ability to generate earnings. These could include actions that terminate the concession, the imposition of taxes or regulations that severely reduce the value to the investors, restrictions on the ability to collect or raise tolls as specified in the concession agreement etc. Many projects are delayed because of the difficulties of acquiring right-of-way or environmental clearances that both the governments and the operators underestimate. Government generally agrees to compensate investors for political risks, although in practice, governments may cite justifications for their action to delay or prevent such payments. Thus, private investors generally assume the risks that are associated with the dispute resolution and the ability to obtain compensation if the government violates the concession agreement.

### **CHAPTER NEWS**

### AURANGABAD

### **CEP on GST Audit & Disclosures**

The Chapter organized a CEP on "GST Audit & Disclosures" on 14th June, 2019 at CMA Bhawan, Aurangabad.

CMA Brijmohan Sharma, Past President ICAI and Mr. Madhavan Iyengar, Practicing Chartered Accountant were the speakers.

CMA M R Pandit immediate past Chairman of the Aurangabad Chapter & CMA U.D. Bhamekar welcomed the speakers. CMA Suresh Pimple -Chairman Professional Development Committee introduced the speakers to the audience.

CMA Birjmohan Shama explained in detail about the provisions GST Audit Disclosures, where Mr. Madhanvan Iyengar gave the details of increasing scope & recent changes of GST Act in India.

The Secretary of the Chapter, CMA Kiran Kulkarni, gave the idea about the workshop and proposed the vote of thanks.

### Yoga Day

International Yoga Day was celebrated at CMA Bhawan, Aurangabad on 21st June 2019. CMA Suresh Pimple taught the Yoga to the Members and Students. He emphasized on the many benefits of practicing Yoga and also stressed on the fact that Yoga is the scientific way of being healthy and increasing our life expectancy.

### Celebration - GST Day

The Chapter had organized a discussion session on the occasion of "GST Day" on 1st July 2019 at CMA Bhawan, Aurangabad. A brief presentation was given by the Chairman Professional Development Committee, CMA Suresh Pimple, and it was followed by group discussion. The Chairman of Aurangabad Chapter of ICAI,CMAParag Rane, Treasurer, CMA Bisheshwar Sen, Chairman Training & Education Committee CMA M.R.Pandit and students were present on this occasion.

### BARODA

#### **GST Day Celebration**

Chapter organised Discussion session on GST at Baroda Chapter office. CMA Hardik Diwanji, Chairman has addressed the session and the CMA Mihir Vyas, Secretary has concluded the same. 10 members have participated.

### Yoga Day Celebration

Chapter celebrated International Yoga Day on 21st June 2019, Friday. Around 20 members have participated in the event.

### Evening Talk on 'Critical Aspects in GST Audit'

Chapter has organized an Evening Talk on 'Critical Aspects in GST Audit'. The speaker was CMA Dilip Athawale. Around 20 members has participated in the said event.

### Evening Talk on 'ITC, POS & GTA in GST Regime

Chapter has organized an Evening Talk on 'ITC, POS & GTA in GST Regime'. The speaker was Shri Sanjay Sarswat. CMA Mihir Vyas, Secretary of Baroda Chapter Felicitated the speaker and CMA Kailash Sankhlecha has addressed the session. Around 20 members have participated in the event.

### **Career Counselling**

Chapter conducted Career Counselling programme for T.Y. B.com students at M. S. University. Around 500 students have attended the programme.

### NAVI MUMBAI

### GST Day programme - 1st July 2019

The Chapter celebrated GST day on 1st July 2019 at Karmaveer Bhaurao Patil Vashi. This programme was organised on the occasion of 2nd anniversary of GST launch from 2017. The Speakers of the event were CMA Sushant J Ghadge and CMA Anil Jha.

Both the speakers interacted with the participants to give insights of the GST basic concepts. CMA Sushant J Ghadge gave latest updates about GST and shared updates of 35th GST council meeting held on 21st June 2019. Speaker CMA Anil Jha explains how GST which is one of the important programmes amongst the various programmes implemented by Government of India which helps India to build its path for a better future.

The session was very well appreciated by the participants.

### **CEP on "Implications of Union Budget**

The Chapter organized a CEP on "Implications of Union Budget" on 14th July 2019 at Conference Hall of Karmaveer Bhaurao Patil College, Vashi,

The programme commenced with the introduction of the speaker CMA K M Riyazuddin by CMA Sirish Mohite, Chairman.

The Speaker, CMA K M Riyazuddin, explained Union Budget and Indian government vision for the economy and country for next 5 years which can be achieved through it. He also explained country's GDP growth, present state of economy and governments vision of "Reform, perform and transform." He also underlined the role of cost accountants in fast growing economy of India. He brought to light that growth of financial and infrastructure sector has opened up many areas of opportunities for the cost accountants.

The session was very interactive and speaker thanked all participants for making session interesting with their questions and discussion.

The programme completed with felicitation of CMA K M Riyazuddin by senior member CMA M K Narayanaswamy & Secretary, CMA Ajay Mohan, CMA B N Sapkal proposed vote of thanks.

#### **Oral Coaching Inauguration**

Chapter conducted the Oral Coaching inauguration

function on July 28, 2019 at K.B. Patil College, Vashi. The Oral Coaching Classes will commence from 1st August 2019 for Foundation and Intermediate for December 2019 exams. The Chief Guest for this event was CMA Hardeep Singh Sodhi, Head Audit, RIL, Mumbai.

CMA L Prakash, Past Chairman of the Chapter welcomed the Chief Guest and briefed the audience on his journey to the top at RIL. CMA Sirish Mohite briefed the students and other members present, on the Oral Coaching course curriculum and Practical Computer Training and Communications and Soft Skills Workshop which will be organized for the benefit of the students.

CMA Vaidyanathan Iyer ,Vice Chairman of the Chapter introduced the various faculties appointed for Oral Coaching Class and felicitated them at the hands of the Chief Guest and welcomed them to the Chapter.

The Chief Guest then gave a pep talk to the students on the roles of future CMA's and explained that teachers will tutor the students, but the individual effort of the students will take them through.

CMA Vivek Bhalerao, Chairman PD Committee of the Chapter congratulated the Chapter students who passed Foundation Exam & enrolled for Intermediate in the upcoming batch.

CMA Ajay Mohan (Secretary of the Chapter) proposed the vote of thanks.

### PIMPRI-CHINCHWAD-AKURDI

### Seminar on GST Audit & Recent Amendments in GST Law

The Chapter conducted full day seminar on "GST Audit & Recent Amendments in GST Law" on Sunday, April 21, 2019 at ASM Group of Institute, Pimpri-Chinchwad, Pune 411019.

The program was inaugurated at the hands of Chief Guest Shri Prashant Nandedkar, Joint Commissioner, SGST, Pune. The programme commenced with the lighting of the lamp by the dignitaries namely: Shri Prashant Nandedkar, eminent speakers CMA Brij Mohan Sharma, Past President, ICAI, CMA Suhas Kulkarni and Mr. Madhavan Iayengar.

### 60th Foundation Day - 28th May 2019

Chapter has celebrated the 60th Foundation Day of The Institute of Cost Accountants of India on 28th May 2019 at CMA Bhawan.

CMA Ashish Deshmukh, Past Chairman and member of the managing committee of Chapter has given information about the Institute in brief on the occasion

CMA Dhananjay Kumar Vatsyayan, Vice-Chairman of PCA Chapter gave lecture on "Safety Training". In view of the Surat accident he had given presentation and guided the members, staff members and students on safety about fires. CMA Vatsyayan gave demo on how to take safety precaution on fire and burns. He also explained types of Extinguishers and their uses related to fires.

The Students of PCA Chapter of the ICAI have shared their thoughts on this auspicious day.

### **SURAT-SOUTH GUJARAT**

### Inauguration of July-December 2019 Oral Coaching Session

On 15th July, 2019 the oral coaching (July-Dec-2019) session was inaugurated by Mr. H. S. Rajyaguru - District Education Officer - Surat District and Shri Damjibhai Mavani - Secretary Surat Diamond Association & BJP Secretary, Surat City, Also Dr. Arun Agrawal, Education Inspector was accompanying DEO.

CMA Brijesh Mali ,Chairman gave welcome address, Shri Rajyagurujee addressed First session to final students, Shri Damji Mavanijee addressed second session to foundation and intermediate students. The speakers motivated students on how to achieve the goals and how to be successful in life by the different distinguished people's examples. In total 100 students joined the programme. The function concluded with the vote of thanks proposed by CMA Bharat Savani, Vice Chairman of the Chapter.

### Free Medical check-up Camp

Chapter organized a Free Medical Checkup camp for all students, members and staff of the Chapter at Kiran Multispecialty Hospital at Katargam, Surat on 22/06/2019. The Medical checkup was followed by felicitation of Padmashree Mathurbhai Savani, Social Activist, Industrialist and Founder member of Kiran Hospital by CMA Brijesh Mali, Chairman and CMA Nanty Shah, Secretary of the Chapter. Dr. Snehal Patel CEO of Kiran Hospital was felicitated by Vice chairman, CMA K C Gupta and CMA Tushar Ramani - coordinator of the program.

### Yoga Day

The Chapter celebrated 21st June 2019 as Yoga Day at conference hall of chapter office. CMA Brijesh Mali, Chairman of the Chapter welcomed with memento & introduced Ms. Raxa Raj, Yoga Teacher who explained the concept of Yoga. Thereafter, she showed various postures of Asanas and Pranayam and all participants practiced the same. Around 15 members, students and staff member attended the programme.

### CEP on "Practical Issues faced while filing GSTR - 9 and their solutions"

Chapter organized a CEP on "Practical Issues faced while filing GSTR - 9 and their solutions" on dated 01-07-2019 at Chapter's Premises.

CMA Nanty Shah, Secretary of the Chapter welcomed all the participants and informed them about GST day celebration. CMA Shreyas Patel, faculty for the programme guided all the participants about the practical issues and their solutions. About 15 members took part in the programme. CMA Pankaj Kannaujia, Treasurer of the Chapter proposed the vote of thanks.



CMA R R Ahirwar being felicitated by CMA Vinayak Kulkarni during CEP organized by WIRC on 12th July 2019.



CMA Vaibhav Joshi felicitating CMA Arup Bagui during CEP organized by WIRC at Thane SMFC on 28th July 2019. Also seen CMA Debasish Mitra, CCM



Mr. Rajesh Patil being felicitated by Ms. Natika Poddar during the CEP on Budget organized by WIRC at Borivali SMFC on 13th July 2019



Mr. Madhavan Iyengar, Chief Speaker, CMA B.M.Sharma, Past President of the Institute, CMA M.R.Pandit, Past Chairman of Aurangabad Chapter and CMA Suresh Pimple, Chairman, P.D.C. of Aurangabad Chapter during CEP on "GST Audit & Disclosures" organized by Aurangabad Chapter on 14th June 2019



CMA B. M. Sharma, Past President, ICAI felicitating Mr. Prashant Nandedkar, Joint Commissioner, SGST, Pune during Full Day Seminar on GST Audit organised by Pimpri-Chinchwad-Akurdi Chapter on 21st April 2019.



(L to R), CMA Sirish Mohite, CMA Hardeep Singh Sodhi, CMA Ajay Mohan, CMA Vaidyanathan, CMA Sushant Ghadge during Oral Coaching Inauguration function organized by Navi Mumbai Chapter on 28th July 2019



Mr. Damjibhai Mavani, CMA Brijesh Mali, Mr. H. S. Rajyaguru, DEO Surat District, Mr. Arun Agrawal, CMA Bharat Savani, lighting lamp during inauguration of Oral Coaching classes of Surat-South Gujarat Chapter.



Mr. Sanjay Saraswat being felicitated by CMA Mihir Vyas during Evening talk on 'TTC, POS & GTA in GST Regime" organised by Baroda Chapter on 27th July 2019.

### Inauguration of Oral Coaching Classes - WIRC - 15th July 2019



CMA Laxman D. Pawar, Chairman, WIRC and CMA Harshad Deshpande, Treasurer WIRC addressing students - Sydenham College.



CMA Sukrut Mehta addressing students - N. M. College, Vile Parle



CMA Kishore Bhatia addressing students - R. J. College, Ghatkopar



CMA Darshan Vora addressing students - Thane SMFC

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