Damodaran on the value of stories in business

Is Green Finance a fad or does it offer alpha potential?

the Future of Equity Markets

Asia-Pacific Research Exchange
Dear Members,

CFA® Institute has launched Asia-Pacific Research Exchange (ARX), an online platform for the sharing of research on socio-economic trends related to finance and investment. The goal of ARX is to be a user-driven hub of thought leadership and research insights that are helpful to individuals who want information about investing in the Asia-Pacific region.

ARX has a wide range of contributors ranging from investment management firms in developing markets like Bangladesh to academia from developed markets like Hong Kong. If you have written any interesting work that the broader community might be interested in, we encourage you to share your work via ARX. All you need to do is register for a free account at www.arx.cfa. Statistics of traffic for topics most downloaded from ARX are a cue for the local CFA societies in deciding what symposiums to organize. One such topic was a series on environmental, social, and governance (ESG) impact on finance. One of these symposiums was held in Singapore with panel speakers representing different aspects of the green finance value chain, including:

- S&P Dow Jones Indices, which measures green bond issuers for index inclusion.
- City Developments, which issued Singapore’s first green bond.
- ADL Infra Capital Myanmar, a venture capital firm that invests in green infrastructure.

(Read Is Green Finance a Fad or Does it Offer Alpha Potential? on pp7.)

This issue also features the CFA Institute team responsible for driving ARX. Find out what’s behind the research platform and what’s in the pipeline (read Asia-Pacific Research Exchange on pp18).

Other highlights during the second quarter included presentations by distinguished personalities of thought leadership facilitated by our Professional Development Committee. In April 2017, there was a PD talk by Professor John Kay, one of Britain’s leading economists (read The Future of Equity Markets on pp4). In May 2017, Professor Aswath Damodaran, the celebrated author of academic texts on valuation, corporate finance, and investment management, addressed our members (read Narrative and Numbers on pp13). Professor Damodaran’s arrival was met with great enthusiasm and a turnout exceeding 300 people, 5 times what we normally see at a speaker event.

Other professional development events during the quarter included the following:

- Professor Joel Litman’s critique of IFRS and GAAP.
- Economist Diana Choyleva’s discussion of China’s economy.
- Private equity fund manager Yong Kwek Ping’s discussion of private equity investment in China.
- Global Head of Commodities and Real Assets Indices at S&P Dow Jones Indices, Jodie Gunzberg, CFA discussed the use of commodities for diversification.
- Manager of sustainable equity funds, Jeroen Bos, CFA discussed ways in which integration of ESG factors contribute to better investment performance.

In addition to our monthly networking drinks, our Networking Committee rounded up members for the JP Morgan run on 27 April 2017. Members also enjoyed the movie screening of Fast & Furious 8 on a Saturday afternoon (15 April 2017) at Bugis+.

This year marks the 30th anniversary of the founding of the CFA Singapore Society. We are planning a special gala dinner in October 2017 to celebrate our growth, and to show appreciation to our volunteers. A video commemorating the Society’s milestones over the past three decades will be screened that evening.

Please look out for our invitation to all members to join us for a time of celebration and networking.

Jan M. Richards, CFA
President
CFA Singapore
The celebrated teacher of valuation, Professor Aswath Damodaran, spoke to over 300 CFA Singapore members at Joyden Hall, Bugis+ on 23 May 2017.

13 Narrative and Numbers
the value of stories in business
Aswath Damodaran

4 The Future of Equity Markets
Professor John Kay

7 Is Green Finance a Fad
or does it offer alpha potential?
Cheng Tianyin | Esther An | Darren Chua | Sun Xi | Dr Tony Tan, CFA

18 Asia-Pacific Research Exchange
Dr Tony Tan, CFA | Scott Lee | Mary Leung, CFA
The Future of Equity Markets

Businesses have changed since the time when people began using stock markets to raise capital. Have capital markets changed in line with the change in the nature of businesses? What type of capital markets would we need in order to maintain these kinds of businesses? Do we still need the kinds of capital markets that we’ve been used to for the last 150 years?

Leading British economist and author of award-winning book Other People’s Money: The Real Business of Finance, Professor John Kay, spoke on how companies have changed over the course of time and addressed CFA members’ questions on financialisation.

Largest Companies by Enterprise Value in 1900

The leading companies in the 1900s (excluding railways, railroads and banks) were either resource companies or manufacturers. They included Standard Oil, Carnegie Steel, Wernher Beit / Rand Mines, Consolidated Goldfields, De Beers, J & P Coats, Tabakaregi, American Sugar, Rio Tinto, and Solvay.

Standard Oil, which was founded by John Rockefeller, was the largest oil refinery in the world of its time. Carnegie Steel was sold to US Steel to form the world’s largest steel producer back then. J & P Coats, a cotton mill, was the world’s largest manufacturer after Carnegie Steel. Wernher Beit / Rand Mines, Consolidated Goldfields, and De Beers were mineral resource companies of British origin operating in South Africa.

Tabakaregi was a private monopoly that controlled the production of tobacco and cigarettes in Austria. American Sugar was the largest American food manufacturing company. Rio Tinto is another resource company. Solvay is Europe’s largest chemical company.

The use of stock markets to raise capital for manufacturing companies was the phenomenon of the first half of the twentieth century. Most of these companies have disappeared from the list of top companies.

The First Fortune 500 Leaders

In 1956, the first Fortune 500 list was compiled: General Motors, Exxon, Ford Motor, US Steel, Chrysler, General Electric, Inland Steel, Bethlehem Steel, Armour, Du Pont. The list was dominated by
manufacturing businesses. There were 3 steel companies on it and 3 automobile manufacturers. Exxon was the largest component that emerged after Rockefeller’s Standard Oil was broken up by anti-trust busters. General Electric began as a vehicle for Thomas Edison’s electrical inventions. Now, its largest single business is GE Healthcare. Armour was the largest food manufacturing and processing business in the United States.

All these companies, with the exception of Exxon, were manufacturing companies and heavily capital-intensive businesses.

**Largest Companies by Market Capitalization Today**

Today, most of the largest companies by market capitalization are actually service businesses. As at April 2017, they were Apple, Alphabet, Microsoft, Amazon, Berkshire Hathaway, Facebook, Exxon Mobil, Johnson & Johnson, J P Morgan Chase, and Alibaba. Most of these companies did not exist in 1956. The only exceptions were Exxon, Johnson and Johnson, J P Morgan, and to a certain extent Berkshire Hathaway.

Although Johnson and Johnson is a manufacturing company, it is very different from the manufacturing companies on the 1956 and 1900 lists. Today, not many people go home from a day’s work at Johnson and Johnson tired out after manual labor.

In 1956, the largest companies by employment would have been largely the same as the largest companies by market capitalization. Today, none of the largest employers back then are still on the list. The two largest employers now are actually Walmart (2.2 million employees) and Foxconn, a Chinese manufacturer. Five of the top ten employers are Chinese. The western businesses on the list of largest employers are service businesses: Wal-Mart, Tesco, Compass Services (a hospitality services company), and Yum! Brands (which owns Kentucky Fried Chicken, Pizza Hut, Taco Bell, etc).

The nature of business has changed in these fundamental ways: Operating assets account for a relatively small portion of market capitalization. The bulk of the market capitalization is based on expectations of future profits. All the companies are knowledge businesses and none of them are dependent on external capital markets. Every one of the companies on the list of largest companies by market cap generates more than sufficient cashflow from internal operations to meet their investment needs.

Professor John Kay, one of Britain’s leading economists, is the Chairman of CFA Institute’s Future of Finance Advisory Council.

He is a visiting Professor of Economics at the London School of Economics. Previously, he was director of Said Business School, University of Oxford. Professor Kay is a fellow of the British Academy, the Royal Society of Edinburgh, and the CFA Society of the UK. He has chaired the review of equity markets and long term decision making for the UK government.

Professor Kay is a director of several public companies. He contributes a weekly column to the Financial Times. A prolific author, his most influential work has been on banking regulation. Some of his books include the following.

- *The Long and the Short of It: finance and investment for normally intelligent people who are not in the industry* (2009)
- *Obliquity* (2011)
- *Other People’s Money: Masters of the universe or servants of the people?* (2015)
The largest investor on the list in the western world is Exxon Mobil. Exxon Mobil is a cash-generative business. The amount that Exxon Mobil has bought back in shares and put into its own Treasury is actually greater than the value of its oil assets.

These companies are not dependent on equity markets anymore. In recent years, when these companies come to list in the equity markets, it is not to raise new capital or to invest in new products, machinery, or buildings. They come to the equity markets to provide liquidity for early stage investors.

The only company that has raised significant amounts of money in recent years is Facebook. It raised about US$16 billion in its IPO and stated that it didn’t actually know what it was going to do with the sale proceeds. It paid US$4 billion in cash for WhatsApp and made a couple of other acquisitions. That is how things have changed.

**Ashish Goyal:** One key idea from *Other People’s Money* was that financialisation over the past 3 decades has created a structure that lacks resilience and supports absurd volumes of trading. Another key idea was that regulation has contributed more to problems than solutions. A third idea was that the finance sector needs to be reminded of its primary purpose to manage other people’s money for the benefit of businesses and households.

There was also the idea that even in very large financial firms, a large majority of employees do mundane tasks and get the average compensation of that economy but a very small percentage at the top get a very large compensation. The comment was that the people at the top should take responsibility for the bad systems.

More than a year has passed since the book was first published. What are your thoughts on the impact that the book had and what people have said after looking at your book?

**John Kay:** There were a few main types of responses.

People from the banking and trading sector have repeatedly tried to get people who had been burnt in the financial crisis to engage in some sort of debate. They haven’t succeeded.

The general audience who have read the book think they began to understand quite a lot of things they didn’t understand before, and it confirmed prejudices which they had against the financial sector. Before I published the book, I said to audiences like that: I know you’re angry about the financial sector. I’ve tried to give an explanation of the things that I think you should be angry about. I think I’ve succeeded in some degree with that.

People with hostile responses were actually regulators because these are people who feel they were required to engage in the arguments of the book. They are essentially threatened by the arguments of the book. In the finance sector, we have created a huge industry of regulatory agencies, of compliance and regulatory staff, as well as firms of lawyers and accountants who act as mediators about the things that are said about the structure of finance and what finance needs to deliver.

The UK took two very significant steps in 2012. One was to put in place a senior manager’s regime which was designed to deal with the issue of people at the top of the financial services business being responsible for what goes on in it. The second measure was to introduce ringfencing of retail banking. These measures are not due to come into full effect until 2019.

There was a lot of pushback to these proposals and the senior manager’s regime was significantly watered down. It remains to be seen if the ringfencing of retail banking will be effective.
Is Green Finance a fad or does it offer alpha potential?

Environmental, social, and governance (ESG) integration is gaining traction in Singapore.

Singapore’s first green bond was launched in April 2017 by City Developments to finance the retrofitting and upgrade of Republic Plaza at Green Mark Platinum level.

Last year, SGX made it mandatory for Mainboard-listed companies to report their environmental, social and governance practices starting from the financial year ending 31 December 2017.

The Society and CFA Institute invited stakeholders from corporate issuers, research, and venture capital to share their insights into green finance.


Opening remarks were given by Dr Tony Tan, CFA, Head, Global Society Advocacy Engagement, CFA Institute. Sun Xi, founder & CEO of ESGuru, was the event moderator.

Opening remarks by Dr Tony Tan, CFA, Head, Global Society Advocacy Engagement, CFA Institute.

Communication from Chinese member societies of CFA Institute on its Asia-Pacific Research Exchange show that ESG integration, especially in green bond finance, is picking up quickly in China.

The Chinese accounted for one third of the global green bond issuance of US$93 billion in 2016. When China is into something, that something will become big.

The International Finance Corporation and Amundi also recently created a US$2 billion green bond fund aimed at emerging markets.

The opportunities are fantastic in this space. I believe ESG will drive the growth of a new asset class in the Asia-Pacific region.

Implementation of good governance practice is now relatively mature in global ESG integration. I believe the next big thing in ESG will be the environment aspect over the next 5 to 10 years, followed by the social aspect.
Sustainable investing was a 23 trillion dollar market in 2016 and is the fastest growing segment of the investment industry. There are now more than US$60 trillion in assets under management assigned to the US-PRI via its 1,500 signatories worldwide, up from just US$4 trillion in 2006.

Today, the concept of sustainability is directly influencing companies, policy makers, and other market participants. There have been concrete actions from the corporate sector in their commitment to create long term shareholder value in terms of reporting, tracking, and measurement of sustainable development goals. As the value chain moves from ‘green’ instruments to sustainable finance, and with improved data and metrics, investors will be able to make better investment decisions on the elements that are most relevant.

Over the past few years, there has been increasing interest in a relatively new green capital markets instrument: green bonds. Green bonds are plain vanilla fixed income instruments created to fund projects that have environmental or climate-related benefits. Green bonds can play an important role in engaging institutional market participants in the transition to a low-carbon and climate-resilient economy. Global labelled green bond issuance in 2016 was US$93 billion - more than double the amount of US$41 billion in 2015. Approximately US$36 billion was issued by China alone.

Although many market participants have already committed to investing in green bonds, mainstream investors entering the market still face multiple challenges and investment risks, including size, duration, liquidity, and credit.

The S&P Green Bond Select Index was recently launched to serve as a vehicle that meets the green credentials demand from investors. The index forms the basis for one of the world’s first green bond ETFs. The global green bond market, as represented by the S&P Green Bond Select Index, has many characteristics that are similar to the global core bond market, as represented by an index such as the S&P Global Developed Aggregate ex-Collateralized Bond Index. As a result, green bonds may fit within a global core fixed income allocation without significantly affecting the risk return profile.
What is green finance?

**Cheng Tianyin:** Green finance is a framework of financial instruments and counterparties to facilitate the financing of companies and projects that are environmentally friendly or that positively impact the climate change issue.

The market today relies on voluntary declaration by the issuer of what constitutes ‘green’. An issuer like City Developments may say a bond is ‘green’ because it is using the issue proceeds to fund green projects. It may also continually report on how the proceeds have been used.

In the global markets, there is a Climate Bonds Standard that provides international standards on the process through which an issue may be verified to be ‘green’. Over the years, independent third parties have come up with guidelines that assess whether a project or an asset is ‘green’.

There are also national standards such as the Green Bond Guideline issued by the People’s Bank of China (the central bank of China).

There are many dimensions. Standards are not aligned as to how people define ‘green’. There is an urgent need to have clearer standards.

**Esther An:** Broadly, green projects look at energy efficiency, water efficiency, waste management, and the supporting technologies. The default endorser is the Climate Bond Initiative, which has guidelines on what qualifies as a green bond. Global Real Estate Sustainability Benchmark has also issued guidelines. Even crowd-funded projects that benefit the environment may be considered as ‘green’.

City Developments started integrating ESG into its business in 1995. The initial 10 years were very challenging because there was a lack of understanding on corporate social responsibility. At that time, climate change did not have the limelight that it has today. The United Nations Global Compact was launched in 2000. Singapore’s Building and Construction Authority Green Mark scheme was launched only in 2005. It is an internationally recognised green building rating system tailored for the tropical climate.

Green finance goes hand in hand with the level of awareness and the extent to which action to address climate change has been adopted. It was only in the last few years that people have begun to see sustainability as the next big thing. When the UN launched the Sustainability Development Goals in 2015, everyone in the corporate sector starting talking about sustainability. The Singapore Exchange made it

Ms An is a pioneer CSR practitioner for over 20 years, and has been instrumental in building up CDL’s sustainability leadership.

CDL is the first and only Singapore company listed on the Global 100 Most Sustainable Corporations in the World for 8 consecutive years and is currently ranked top real estate company. It is also the first to be included in leading global sustainability benchmarks such as the FTSE4Good Index Series since 2002, MSCI ESG Research (AAA rating) since 2009 and Dow Jones Sustainability Indexes since 2011.

Ms An is a committee member of the Global Compact Network Singapore, which is the local network of UN Global Compact for CSR. She is a member of the World Green Building Council’s Corporate Advisory Board and the Urban Land Institute Women’s Leadership Initiative Singapore Steering Committee.

Her latest appointments include: member of the UNEP Finance Initiative Real Estate Work Group, GRI Corporate Leadership Group on Integrated Reporting and Sustainable Stock Exchanges’ Green Finance Advisory Group.
Mr Chua has been the Vice President for development and investment for Infra Capital Myanmar since early 2016. He drives developmental efforts, deal origination and due diligence activities under the InfraCo Asia mandate to the company for Myanmar. The sector that the platform serves includes power & utilities, telecommunications and social infrastructure.

He is also an independent director to Zero2Company, a Korean IT advisory firm to Korean government agency like KICC for their IT start-up initiatives for example the KStartup initiative that just concluded in Nov 2016.

He has more than 10 years of experience in the investment space. Prior to this, he was part of the investment and asset management team within CitySpring, a listed infrastructure trust sponsored by Temasek.

He is a MBA graduate from Manchester Business School and a bachelor graduate in Mechanical Engineering from National University of Singapore. He is also a charter holder in CAIA and has completed CFA level 2.

Darren Chua: Green finance includes public as well as private investment that brings about positive sustainable development to the environment and to society. ADL Infra Capital Myanmar focuses on infrastructure investment in green finance, such as the development of a wastewater treatment plant. Instead of disposing wastewater into the Irrawaddy River and poisoning the fish and the residents of that habitat, a plant can be built to recycle wastewater. That contributes to the environmental sustainability of the country.

Green finance is about projects that improve deployment of scarce natural resources. We should look at the return on investment of green finance projects the way we evaluate other projects, rather than write off the investment under the banner of corporate social responsibility or charity. Green finance projects should be evaluated for an equitable return given the project risk profile.

Is green finance a fad, or does it possess alpha potential?

Green finance is viewed as a necessity today. Last year, about 145 countries ratified the Paris Accord. More and more governments are taking a proactive role to reduce the carbon footprint by changing their countries' energy consumption mix. Even an energy-starved country like Myanmar is looking at alternatives to coal for power generation. It is looking into using more gas or hydropower, instead of coal as the easiest way to generate power.

Foreign investors should not approach emerging markets like Myanmar or Cambodia by looking for exposure to retail demand or fast moving consumer goods. Here is where green finance comes into play in the search for alpha. Green finance is one avenue for alpha as it is a platform for entering markets that are hard to penetrate via traditional finance. Over the past 4 to 5 years, FTSE's fossil-free, green economy index has outperformed the all-inclusive index.

There is high awareness among investors about sustainability issues. Volkswagen's emissions scandal caused its market cap to fall by 30%. When Exxon downgraded the significance of climate change to its corporate risk profile, its market cap fell by 5% in a single day.
We believe there will be more green finance instruments emerging as governments, corporates, and investors begin to recognize the significance of sustainability issues.

**Esther An:** When the UN launched its 17 Sustainable Development Goals in 2015, estimates for realisation of these goals worldwide amounted to some US$5 trillion to US$7 trillion. Much investment is needed for the world to remain on track for the Paris Agreement of holding the increase in the global average temperature to well below 2 °C above pre-industrial levels.

Everyone lives, works, and plays in buildings. Buildings are a big contributor to global warming. The real estate sector consumes about 40% of energy worldwide and accounts for about 40% of the world’s greenhouse gas and carbon emission.

The Global Alliance for Building and Construction looks at working towards net zero-emission buildings. Singapore has a very ambitious masterplan to green 80% of all its buildings by 2030, including commercial and residential, old buildings as well as the new. We are now at 40%. Much funding is needed over the next 13 years to upgrade buildings.

With sufficient funds, you can make a new building as green as you want from the drawing board. It is the old buildings (that can be 30 years old) that are challenging to bring up to the Green Mark. For example, how can a building be upgraded to achieve energy efficiency levels that are of that standard? Substantial investment is needed for technology and equipment. The finance sector is all geared up to tap into these opportunities.

The UN Environment Programme set up its Finance Initiative 2 years ago to work with over 200 leading financial institutions and banks to establish frameworks and to provide funding to achieve the Sustainable Development Goals. All these initiatives will drive demand for the greening of infrastructure.

Our Republic Plaza green bond is an example of a vehicle that funds such efforts. Republic Plaza is a relatively old building that was opened in 1997. At that time, our strategy was to maintain it at the highest Green Mark Platinum standard. Much investment, such as the upgrade of air-conditioning chillers, went into it. Air-conditioning consumes as much as 40% to 50% of the energy consumption in a building.

Mr Sun, a Chinese citizen & Singapore permanent resident, is an ESG consultancy expert and independent commentary writer based in Singapore.

He founded Singapore-based ESGuru, a pioneer and integrated services provider on corporate environmental, social and governance (ESG) related research, consultancy and investment issues in Asia.

From 2010 to 2016, Sun worked for Sustainalytics, a global leader in sustainability research & analysis, serving investors & financial institutions with responsible investment solutions. In Sustainalytics, he participated in the design of ESG rating system and focused on ESG research in Greater China and Asia.

He authored several reports covering diverse ESG topics such as air pollution, food safety, family business and China's Xi-Li Administration. In 2012, 2013 and 2014, he was named one of the top (highest rank was the 3rd best) sustainable and responsible research as well as corporate governance analysts globally in the Thomson Reuters Extel's Independent Research in Responsible Investment (IRRI) Survey.
Chen Tianyin: Investors of mainstream assets look at metrics such as ROE and PE in the financial report of a company. There is a trend of including material ESG factors into such financial reports.

Studies show that companies that emphasize ESG elements are able outperform other companies in financial results and volatility of stock prices. Governance has been the most evident aspect of corporate integration of sustainable development. At S&P Dow Jones, we actively engage asset owners when we build indices.

The key trend we have found is asset owners do not only look at reputation risk arising from whether or not a corporate has ESG integration. We have found that investors such as the Government Investment Corporation of Singapore do require assets to demonstrate return on investment in addition to contributing to the society. One solution is to combine ESG factors with smart beta factors to achieve the risk return profile that asset owners look for.
The way to think about valuation is:
It is a bridge between stories and
numbers.

**Good Valuation**

If I ask you, “Why is the revenue in
your forecast $60 billion?”

Here is the answer I don’t want
to hear: “Because I used 15% for
revenue growth in the first five years,
and 5% for the next five.”

I want to hear what you know about
the company that justifies a $60
billion revenue. Every number in
your valuation has to be backed up
by a story. Conversely, every story
about how great the company is has
to be backed up by a number.

Number crunchers tend to have the
following delusions:

- Delusion of precision: *When in
doubt, add decimals – makes us
feel more ‘precise’.*

- Delusion of being objective: *I’m
just using numbers. How can I be
biased?*

Story tellers tend to have the
following delusions:

- Contempt for number
  crunchers: *Number crunchers are
  boring people who don’t dream in
color.*

- Great believers in the anecdote:
  *If I tell a really good story, I will
  be rewarded with a multi-billion
dollar value.*

- A sample size of one can be
generalized to the entire
universe.

Left to our own devices, chances
are we will find and stay in our own
delusions.

**5-step Process to Valuation**

**Step 1: Develop a narrative for the
business you are valuing.**

In every company I value, the first
thing I do is: I tell a story about
the company. Before I open my
spreadsheet, I first have to get my story straight before I put a number down.

Uber Example

Uber is probably the most valuable private company today. It has a valuation of US$71 billion. I first heard about Uber when I read a Wall Street Journal article in 2014 that said venture capitalists had priced Uber at US$17 billion.

Things to Find Out

1. Why Partners Like the Service

Uber enables a driver to take excess capacity and use it by connecting him to customers and earning a second income from a car he already owns.

2. Why Customers Like the Service

Uber rides are cheaper than other cabs, waiting time is shorter, and they are cleaner.

3. How the Company Makes Money

For providing a match-making service, Uber gets to keep 20% of what the passenger pays for the ride.

4. How the Company Grows

Uber doesn’t own the cars. They don’t hire the drivers. All they have to do is go into a new city, hire a guy, and put him in a room.

5. Barriers to Entry

Why can’t I just go into my basement and start a match-making service? Then, I realized that Uber had 3 things that were a big advantage over me. Firstly, they had US$3bn from the venture capitalist.

Secondly, once they started signing up drivers, there was a networking effect. This means the bigger you get in the ride-sharing service, the more difficult it is for a new player to enter because you have already tied up the resources.

Thirdly, they use the data that they collect on you in effective and creative ways like the Search Pricing service when demand is high.
Step 2: Test the narrative to see if it is possible, plausible, and probable.

There are lots of possible narratives, not all of them are plausible, and only a few of them are probable. Don’t base your valuation input on a fairy tale story.

For example, it is impossible for a company’s revenue to grow so much that it has more than a 100% market share. It is also impossible for earnings growth to exceed revenue growth for long enough that profit margin eventually exceeds 100%.

It is implausible that a company grows and earns higher profits without competition. It is also implausible that it generates high returns with no risk.

It is improbable that a company has high growth with low reinvestment needs.

Step 3: Convert the narrative into drivers of value.

The third step is where the craft of valuation comes in. Check the narrative against history, economic first principles, and common sense.

Take the narrative apart and look at how you will bring it into valuation inputs starting with potential market size down to cash flows and risk. By the time you are done, each part of the narrative should have a place in your numbers and each number should be backed up by a portion of your story.

What if I come to a part of a story that I cannot convert into a number? I firmly believe that no matter how fuzzy your story seems, you can convert it into a number. You just haven’t tried hard enough.

Step 4: Connect the drivers of value to a valuation.

Once you convert each part of your story into inputs for your valuation, your valuation will emerge. Create an intrinsic valuation model that connects the inputs to an end-value in the business.

When you come to step four, you should seek out people who are most likely to disagree with you. Don’t let your defense mechanisms kick in too soon.

Instead of thinking: How dare you criticize my cost of capital!

Think: There’s someone out there who knows more about this than I do, and I’m going to find that person.

Before you start on the valuation process, you have to understand the company and the businesses.

Talk to People who Use the Service

In 2014, intrigued by a news report on Uber’s huge valuation, the Professor downloaded the Uber app onto his smartphone, called a cab, and asked the driver to drive him around for half an hour so that he could ask some questions.

Professor: Is this an Uber car you’re driving?
Cab Driver: This is my car.

Professor: Are you an Uber employee?
Cab Driver: No, I’m an independent contractor.

Professor: Why do you doing this?
Cab Driver: I’ve got a regular job. I don’t make enough money. I already own a car. I just decided to make a second income.

Professor: What does Uber do for you?
Cab Driver: In New York City, it’s illegal to pick up passengers from the street. Uber connects people to customers.

Professor: Did you tell the insurance company about this?
Cab Driver: What they don’t know doesn’t hurt them.

When the Professor wanted to pay for the ride, the cab driver said: “You don’t have to pay.”

Professor: It’s free?
Cab Driver: When you downloaded the app, you had to enter your credit card number didn’t you?

Professor: How do you get paid?
Cab Driver: They send me 80% of whatever you pay them.

Professor: Why 80%?
Cab Driver: I don’t know. That’s what they all do.

Why Passengers Like Uber

Professor: Why do you use Uber on these ride-sharing trips when you already own a car?
Professor’s son: Dad, on Friday nights and on Saturday nights, I really like Uber. I can call Uber from a bar. It’s cheaper than a cab. They come quicker than a cab. They are cleaner than a cab.
Unfortunately, some people restrict their valuation process to getting templates and going through the financial statements. The way to understand a company is to talk to people who use the products and services of the business.

**Step 5: Keep the feedback loop open.**

Face up to the uncertainty in your own estimates of value. Create a process where people who disagree with you the most have a say. Provide a structure where the criticisms can be specific and pointed, rather than general.

Listen to people who know the business better than you do and use their suggestions to fine tune your narrative and perhaps even alter it. Work out the effects on value of alternative narratives for the company. Bill Gurley, partner of Benchmark Capital, one of the first venture capital companies to invest in Uber (with a US$2 billion valuation), is on Uber’s board of directors. Obviously, he knew more about Uber than I do. He sent me an email that said, ‘I read your blog on how you valued Uber and I did not like it. I put up a blog post to counter your blog post.’ I went to Bill Gurley’s blog, *Above the Crowd*. His post said: “Uber is not a car service company. It is a logistics services company.”

By using the word logistics, he expanded the potential market to car service delivery and moving. He said Uber can create new demand for car service in parts of the country where taxis are not used including suburbia and small towns.

He said that they are converting their local networking benefits to global benefits. The next time you make a flight reservation on United Airlines, you will get an option that says, “Get me an Uber car when I land in Singapore.” By linking with technology and credit card companies, Uber can have global networking benefits.

I was fascinated by the story. After I read the story, I took my US$100 billion market and made it US$300 billion to include logistics services. I took my 10% market share and made

<table>
<thead>
<tr>
<th>Input</th>
<th>June 2014</th>
<th>September 2015</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Market</strong></td>
<td>US$100 billion</td>
<td>US$230 billion</td>
<td>Market is broader, bigger, and more global than I thought it would be. Uber’s entry into delivery and moving businesses is now plausible, perhaps even probable.</td>
</tr>
<tr>
<td><strong>Growth in Market</strong></td>
<td>Increase market size by 34%; CAGR of 6%</td>
<td>Double market size; CAGR of 10.53%</td>
<td>New customers being drawn to car sharing, with more diverse offerings.</td>
</tr>
<tr>
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**Damodaran’s assumptions for valuing Uber**

<table>
<thead>
<tr>
<th>Input</th>
<th>June 2014</th>
<th>September 2015</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
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<td><strong>Total Market</strong></td>
<td>US$100 billion</td>
<td>US$230 billion</td>
<td>Market is broader, bigger, and more global than I thought it would be. Uber’s entry into delivery and moving businesses is now plausible, perhaps even probable.</td>
</tr>
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<td><strong>Growth in Market</strong></td>
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Aswath Damodaran holds the Kerschner Family Chair in Finance Education and is Professor of Finance at New York University Stern School of Business. Before Stern, he lectured in Finance at the University of California, Berkeley. Professor Damodaran received a B.A. in Accounting from Madras University and a M.S. in Management from the Indian Institute of Management. He earned an M.B.A. (1981) and then Ph.D. (1985), both in Finance, from the University of California, Los Angeles.

He has been the recipient of Giblin, Glucksman, and Heyman Fellowships, a David Margolis Teaching Excellence Fellowship, and the Richard L. Rosenthal Award for Innovation in Investment Management and Corporate Finance. He received the Schools of Business Excellence Teaching Award in 1988, and the Distinguished Teaching award from NYU in 1990. He has also been voted “Professor of the Year” by the graduating M.B.A. class five times during his career at NYU.

Professor Damodaran is the author of several highly-regarded and widely-used academic texts on Valuation, Corporate Finance, and Investment Management. He currently teaches Corporate Finance and Equity Instruments & Markets. His research interests include Information and Prices, Real Estate, and Valuation.

I emailed the revised valuation to him and asked, “Do you like it?”

“I like it a lot. By the way, we’re going to lower the 80:20 revenue split to 90:10,” he said.

I went to my spreadsheet and changed it to 90:10 and came up with a valuation of US$29 billion.

Every time I value a company and someone comes up with a much higher valuation than I do, it’s not my business to step in and say that valuation doesn’t make sense. It doesn’t make sense to me, but I can’t generalize that into: It doesn’t make sense to anybody.

We are missing the point when we argue over the revenue growth rate over the next 5 years. Your argument should be about the vision for the company and which vision is more probable and plausible. Why argue over beta or cost of capital, especially over numbers which are not on the top 10 list of things that drive the valuation?

The number is never quite done as the world changes. Every time there is an earnings report, I update my valuation because there might be something in the earnings report that changes my story for the company. It could be a macro factor. For example, if there is a crisis that may affect an oil company, that changes my valuation of the company. Everything that happens around you can change the valuation.

Aswath Damodaran
Professor of Finance
New York University Stern School of Business
How has ARX been helpful for your personal investment research?

Dr Tony Tan: As a Singaporean, I invest in Singapore equities. I found very insightful analysis on ARX about Singapore’s healthcare sector coming from a Sri Lankan broker. The report provided information about the environment for medical tourism for Singapore hospitals. It helped me understand the sector’s value proposition better.

That is insight that we don’t normally get to see in research produced in Singapore.

Scott Lee: Bangladesh is one of the fastest growing markets in the Asia-Pacific region. The factories in China are relocating to Bangladesh. I found an interesting and insightful review on Bangladesh’s national budget which was posted by one of our institutional contributors in the region.

36 institutions have already registered to contribute research to ARX. They include think tanks, buy-side and sell-side firms, non-government organizations, and universities.
**Bridge between academics and practitioners**

**Dr Tony Tan:** One useful function of ARX is: It highlights interesting content of high quality. ARX is a welcome change for those bogged down by information overload when using the Internet to do due diligence research. Most finance industry practitioners will not want to read a 50 to 60-page academic paper submitted at an academic conference. Yet, that academic paper contains ideas that are relevant to practitioners. We condense that voluminous paper into a two-page *Practitioner’s Brief* in the English language.

To make these more accessible, we even converted them into animated infographics that can be posted on social media platforms such as Facebook or Twitter. The animation directs viewers who need details back to the two-page summary and the full academic paper deposited on ARX.

**Leads for good speakers**

**Dr Tony Tan:** ARX surfaces topics and writers with the highest downloads and views. We follow up on these top topics and researchers by organizing offline presentations where you can dialogue with these contributors face to face.

One such contributor was Chi Yeguang, who received a CFA Institute research award for his work on the outperformance of funds that invested in A-shares that corporate insiders bought.

Chi Yeguang is an Assistant Professor of Finance at Shanghai Advanced Institute of Finance (SAIF), Shanghai Jiao Tong University. He won the first prize of the CFA Institute Research Award for best paper on banking, finance, and investment management at the 29th Australasian Finance and Banking Conference, a PhD conference held in Sydney in December 2016. That was how the Shanghai CFA society came to invite Professor Chi to present to CFA members in Shanghai.

From time to time, ARX promotes a theme for research contributors to focus on. The current theme is Environmental, Social, and Governance (ESG) issues.

We get a lot of content and organize many events along this theme. At the end of each season, we consolidate findings from the contributors in summaries for publication either on the ARX platform or as CFA Institute Research Foundation Briefs.

**Scott Lee:** There will be more offline continuing education seminars in Mainland China, Hong Kong, India, and Singapore as a follow-up on popular ARX topics online.
All the winning papers emerging from the recent research competitions have so far been on China.

- Dr Tony Tan, CFA
  Project Sponsor
  Asia-Pacific Research Exchange
  CFA Institute

What feedback has there been?

Scott Lee: Over the years, we have received feedback from CFA members that there is demand for thought leadership coming out of the Asia-Pacific region. For example, they want to learn about fintech in China from someone close to the ground instead of someone from the U.S. Then, there are members with really good content but lack a channel to surface their research. Members are glad we are catering to their needs.

On the other hand, academics in the Asia-Pacific region frequently face difficulty in getting datasets as well as viewpoints from finance industry practitioners. They want to know if ARX can be a platform for them to conduct surveys among practitioners. They want to follow up on datasets by contacting practitioners for qualitative responses. They want to present their research at seminars in face-to-face meetings with practitioners.

Mary Leung: ARX is an ecosystem comprising of academics, practitioners, and other thought leaders and regulators.

As a hub, ARX brings different people together. For example, someone who has made a presentation on fund liquidity risk management may upload that on ARX. Viewers may post comments on this presentation. A regulator from another jurisdiction may form ideas about how to formulate corresponding policies on fund liquidity risk management after viewing this. They may also use those ideas to engage practitioners within their own jurisdiction. As more and more people use ARX, our network of influence will expand.

Will ARX host discussion forums?

Dr Tony Tan: We intend to take a two-stage approach to forums.

In the short run, it will be a static forum of an issue of widespread interest such as ESG. Hopefully, we will get a few people coming in to discuss the issue. We will probably need a moderator to help create a discussion that has a life of its own.

As we get more functionalities with technical support, we can organize real-time chats with invited speakers on this particular issue.

Mary Leung: Society advocacy leaders can also use the forum as a tool to engage stakeholders in their local jurisdictions.

What’s in the pipeline?

Scott Lee: We have been featuring great content coming out of ARX on social media and our e-newsletter. We’ve now got banners promoting ARX on CFA Institute’s home page. We’ve sent email communications to members in the Asia-Pacific region to announce the launch of ARX. This will be followed by other organic promotions as well as digital advertising.
Most importantly, we have people on the ground. We have about 20 local CFA societies in the Asia-Pacific region. We’ve got representatives from the local societies to spread the word to industry stakeholders. For example, Kanol Pal, CFA, a Singapore society board member who is also the Chairperson of its Career Development Committee, is our council member from Singapore.

Apart from promoting ARX content on social media, we collaborate with local CFA societies to organize forums such as the Green Finance symposium that took place in Singapore on 11 May 2017. We get authors of ARX content to give keynote speeches at these symposiums. We also invite experts from different segments of the finance ecosystem to share their views at these forums. They could come from sell-side, from the buy-side, from research providers, or from corporates.

We are constantly improving the website. Over the past 12 months, ARX has been in the beta phase. We reached out to CFA members and corporate contributors, asking what they want the site to be so that both our objectives and theirs can be achieved. The forum feature will be implemented soon.

Mary Leung: We are still improving the ARX website to make it more aesthetically pleasing and user friendly. For example, the logos of our corporate contributors will be displayed in a carousel. We are adding tabs for our institutional contributors on the main menu. When users log-on, they can go to the tabs for each institutional contributor to see the latest posts and author names.

We are developing analytics for ARX users to identify what content gets noticed. This is to help contributors decide what type of content to upload. Viewer profiles and locations will be made available through our analytics.

**Scott Lee:** The analytics features were built based on feedback from the think tanks, the corporate contributors, and the government. They wanted to see viewer profiles in terms of countries, employer types, and job functions. These features are already in place. Contributors can log-on to ARX two weeks after uploading their document to check the demographics of who’s been viewing it.

Who is allowed to upload material onto ARX?

**Dr Tony Tan:** At this point in time, everyone who registers for a free account on ARX is allowed to upload documents.

We do a general screen to ensure that uploaded materials are relevant for research in investment management and finance in the Asia Pacific market. We do not have content quality screens. The market tells us how valuable a document is by the number of views and downloads. What we do screen for is plagiarism and inappropriate language.

Scott Lee: When we approached the corporates, we made it clear that the website was a hub for thought leadership. We asked them not to post anything motivated by unilateral interest.

As such, ARX doesn’t have many broker reports on buy, sell, and hold recommendations. The contributors have been well-behaved. After all, their logo is next to the content that they post. At the backend, we do check the content to prohibit direct advertising or promotion of business.
Yong Kwek Ping, CEO of Inventis Investment Holdings (China) Co Ltd, a leading private equity firm based in China with more than US$6.2 billion of capital under management, gave an overview of the challenges faced by private equity firms in China – from fund-raising, deal sourcing, due diligence, execution, portfolio monitoring to exit (24 April at SMU).

Professor Aswath Damodaran autographed his latest finance book, Narrative and Numbers – The Value of Stories in Business, for a long queue of fans at his presentation to CFA members.

Dr Andrew Stotz discussed Quantamental Investing – marrying quantitative analysis with fundamental analysis (4 May at Capital Tower).

Jodie Gunzberg, CFA, Global Head of Commodities and Real Assets Indices at S&P Dow Jones Indices, spoke on using commodities as a way of diversification (12 May at Manchester Business School, 55 Market Street).
CFA Singapore sent a team for the 5.6 km JP Morgan race on a Thursday afternoon (27 April). The run was followed by networking drinks.

CFA Singapore Society President Jan Richards, CFA, (right) with lucky draw winner at networking drinks event after the JP Morgan run.

CFA Singapore leadership lunch with Professor John Kay (18 April).

Save and Invest Conference for retail investors organized in collaboration with MoneySENSE and SGX (22 April at NTUC Auditorium).
The CFA Singapore Quarterly features the latest in thought leadership, best practices, and investor education activities of investment professionals in Singapore. Written by a financial journalist for veterans as well as those aspiring to greater heights as an investment professional, this quarterly newsletter commissioned by CFA Singapore is produced by NextInsight (www.nextinsight.net) and circulated to about 10,000 CFA charterholders and program candidates. Email or call Sim Kih (simkih@nextinsight.net) at 6438-2990 for feedback and inquiries.

Andrew Jones conducted a workshop on Coaching Skills for Leaders in Financial Services (8 May at Drama Centre, NLB).

Mentoring program mid-point check (22 May)