

SMU REAL ESTATE TRACK

LKC School of Business

School of Economics



SMU

SINGAPORE MANAGEMENT
UNIVERSITY

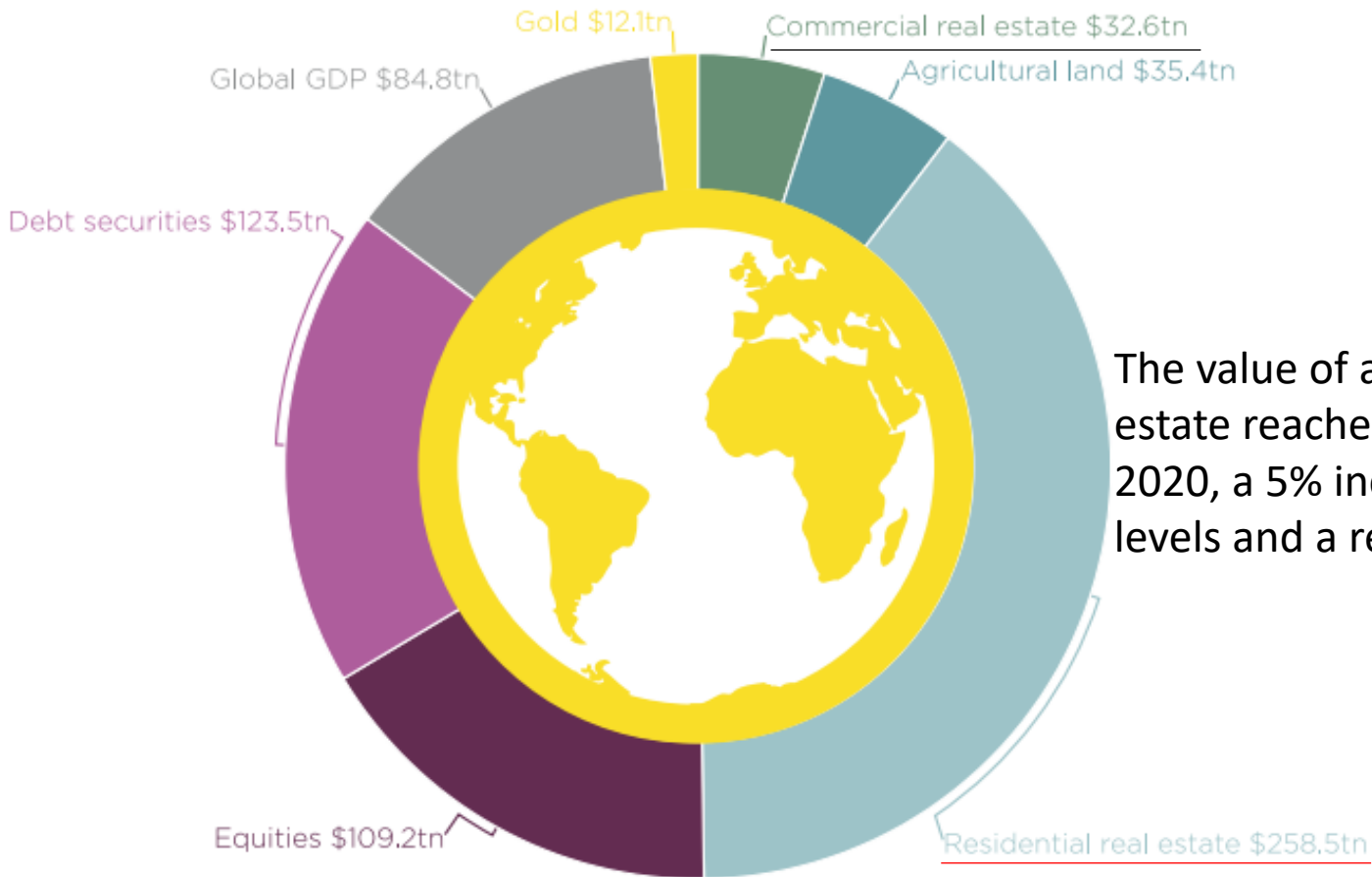
10 Oct 2023



Why Real Estate?

SIZE OF COMMON RE ASSET CATEGORIES

2020 Global real estate universe in comparison



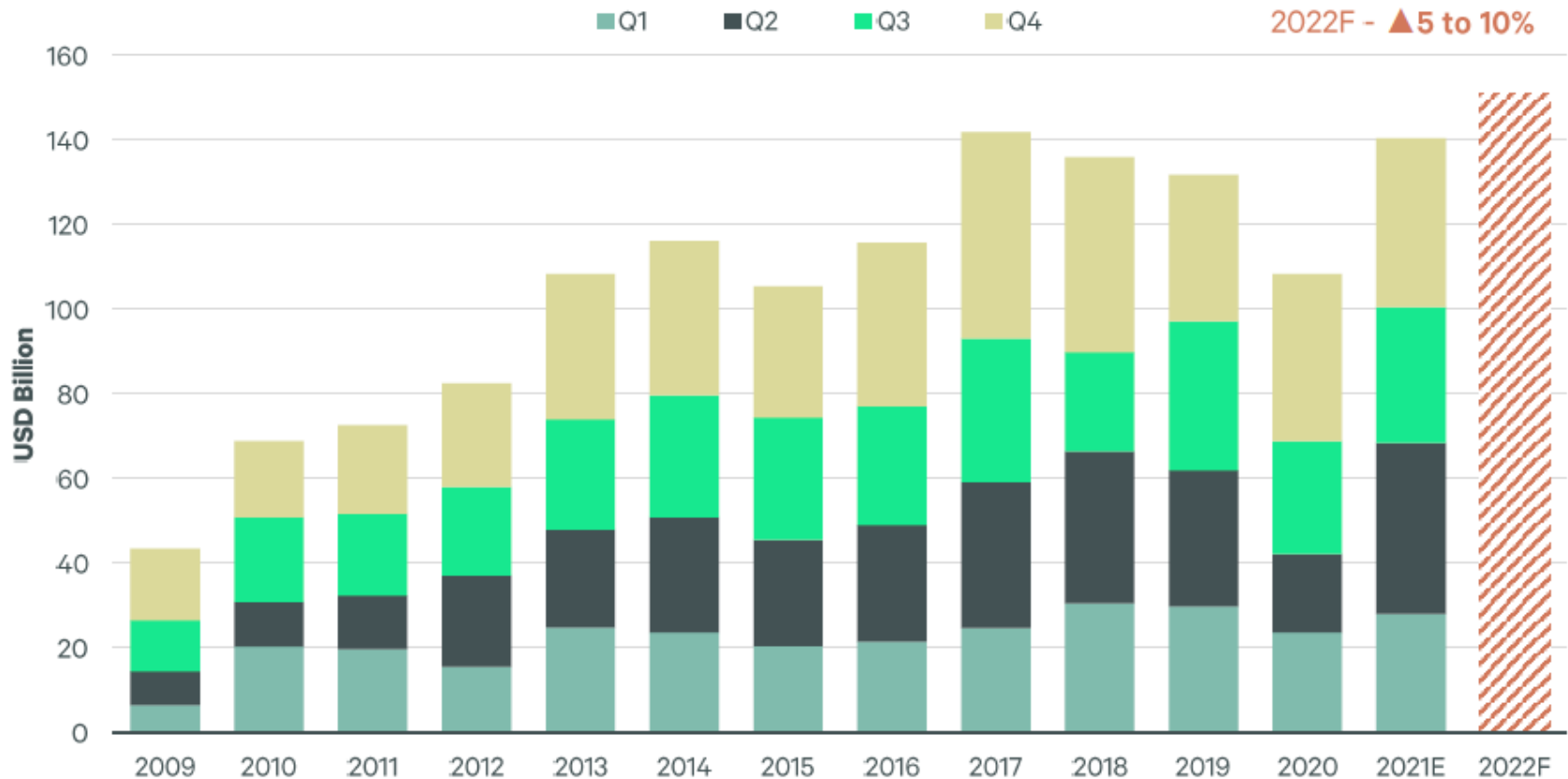
The value of all the world's real estate reached \$326.5 trillion in 2020, a 5% increase on 2019 levels and a record high.

Source: Savills Research

<https://www.savills.com/impacts/market-trends/the-total-value-of-global-real-estate.html>

Real estate investments in APAC have been growing well over the years

Figure 15: Asia Pacific Regional Investment Volume



SINGAPORE NEEDS MORE REAL ESTATE PROFESSIONALS FOR INVESTMENTS AND FINANCE

Singapore is one of Asia's largest REIT & Property Trusts markets



No. of trusts	Market Cap	Avg. Div Yield	Avg. P/B	1 yr SDAV
42	S\$100B	8.0%#	0.75x	S\$228m

- Singapore has **42 REITs & Property Trusts** with a combined market capitalisation of **S\$100B**, representing **c.13%** of Singapore's overall listed stocks
- SREITs have a regulated **gearing ratio limit of 50%**
- The REITs & Property Trusts **offer wide diversity** across property sub-segments (*chart on the right*)
- REIT Indices:
 - **FTSE ST REIT Index:** 34 out of the 42 trusts represented
 - **iEdge S-REIT Index:** 35 out of the 42 trusts represented

Key Statistics At a Glance

- Average dividend yield of 8%
- FTSE ST REIT Index 10-year total return of 58.1%
- Average gearing ratio of 38.1%*
- 10 year market cap CAGR of 7%

*Based on latest quarter filings

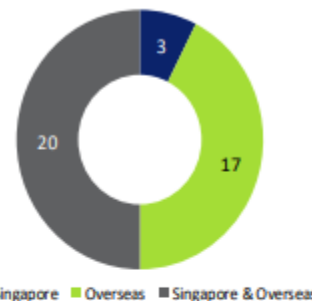
Average dividend yield excludes outliers which over 20% dividend yields

Source: Bloomberg, SGX Securities, data as of 31 May 2023. For more about REITs, find out more at [MoneySense](#) and [REITAS](#)

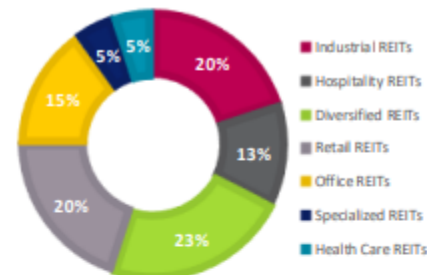
Note: Property Trusts are Business Trusts that have property assets. For more details on Business Trusts, click [here](#). Some of these include Stapled Trusts which are stapled securities. Stapled securities are created when two securities with different legal structures are traded as one, retaining the rights or obligations attached to each of the individual security. See page 16 for list of REITs, property trusts, and stapled securities.



OVER 90% (37) OF SINGAPORE REITs & PROPERTY TRUSTS HOLD OVERSEAS ASSETS



TRUSTS HAVE DIVERSIFIED PROPERTY SUB-SEGMENTS (% BY TRUST COUNT)

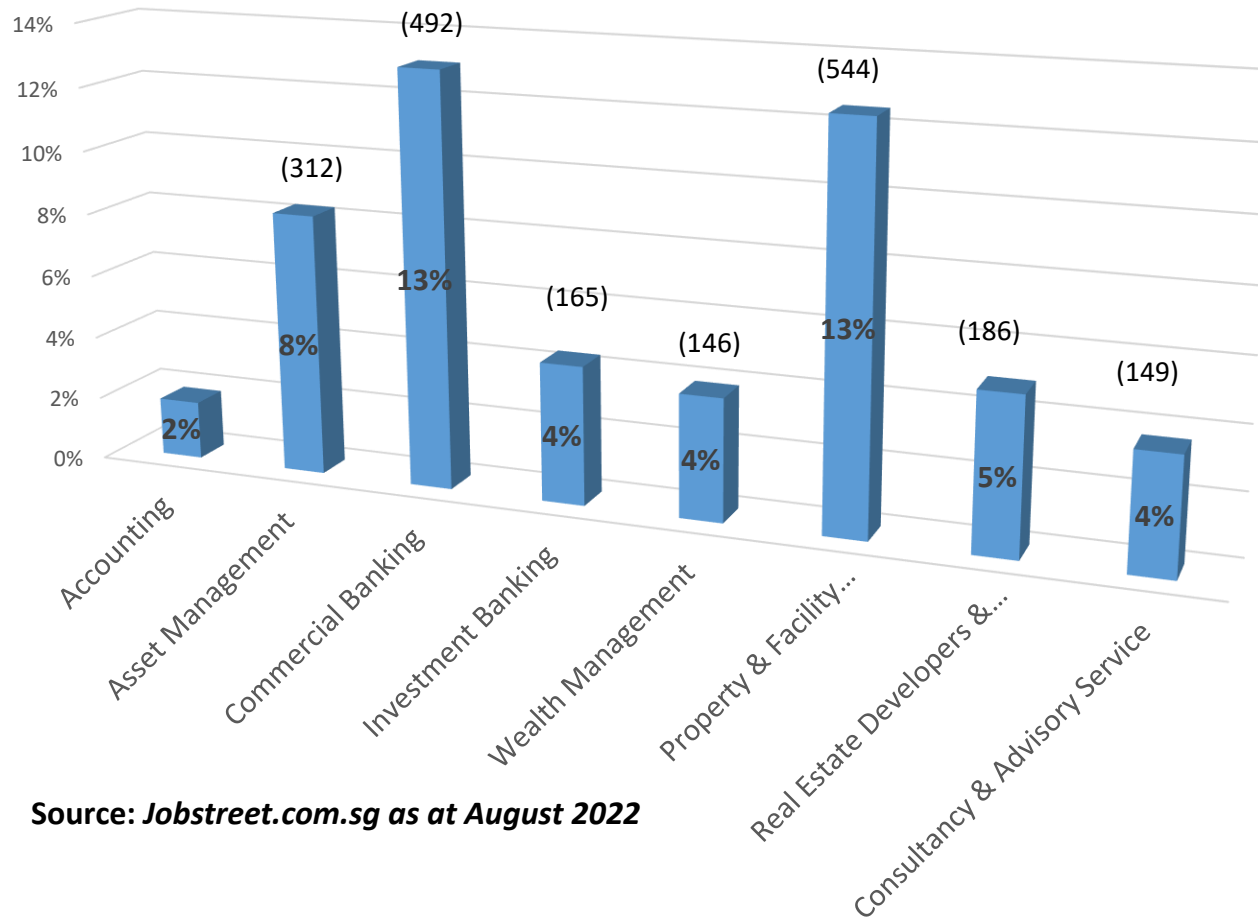


Trusts that have Pan Asian Exposure (based on asset portfolio)

Refer to page 18, for trusts with exposure to non-Asian markets.



*Total number of jobs advertised in August :
3,768 (Full time jobs)
2,064 or 55% are Real Estate functions*

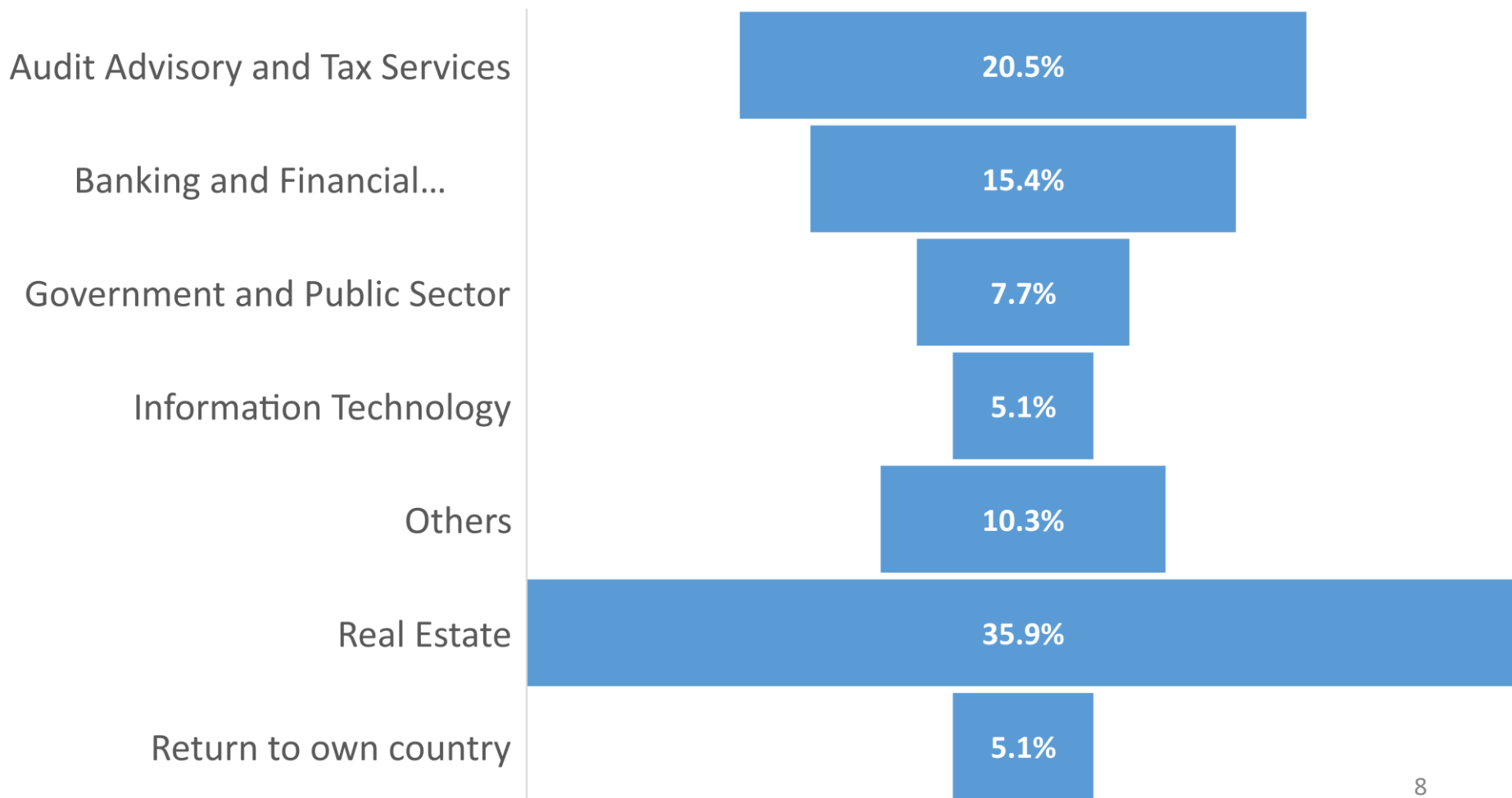


Source: Jobstreet.com.sg as at August 2022

RET UG Graduates Profile

Working Experience

41 Graduates



Companies our graduates Have Joined

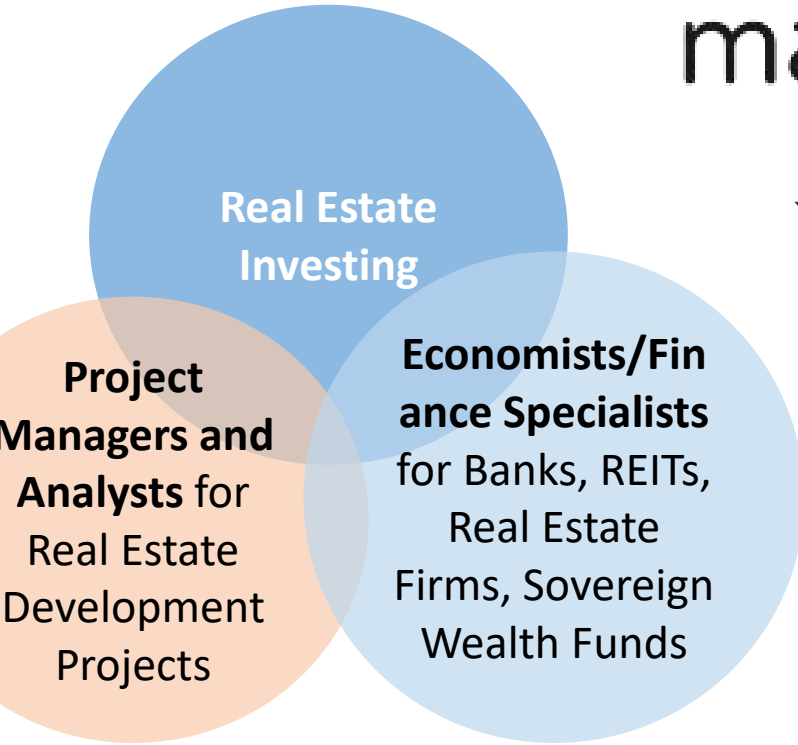
OXFORD

 Far East Orchard

 GIC

 EDMUND TIE

 Blackstone



maple^{tree}

 CITY DEVELOPMENTS LIMITED

 lendlease

 OCBC Bank


PONTIAC LAND

 DBS

*These are not exhaustive

Companies our graduates Have Joined

Updated



PGIM



INLAND REVENUE
AUTHORITY OF
SINGAPORE



Launch of Mapletree Real Estate Programme



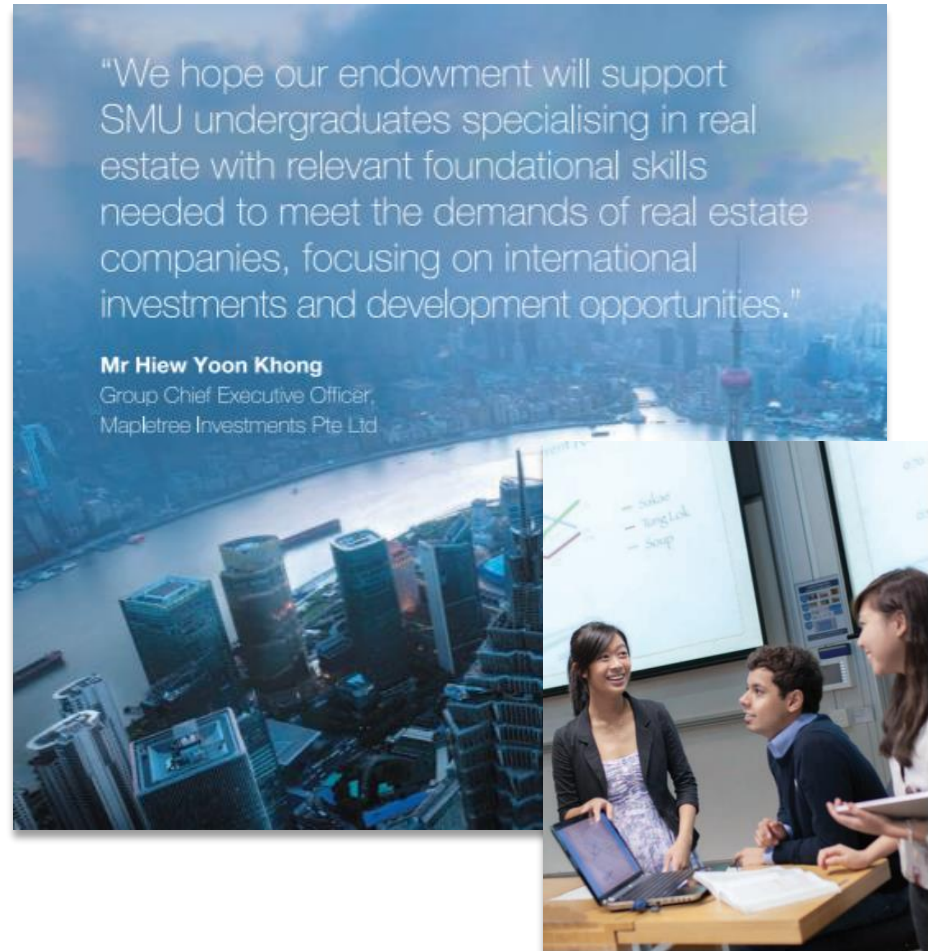
In 2017, Mapletree Real Estate Programme was established at SMU through S\$3 million endowed gift; SMU to offer specialization in Real Estate Investment & Finance from August 2018

- **Mapletree Professorship**
- **Mapletree Awards**
- **Business Study Trips**
- **Mapletree Speaker Events**

The SMU Real Estate Track

Students will leverage on the fundamentals of Finance, Business and/or Economics and acquire the quantitative and qualitative tools necessary for variety of job roles in the sector.

The track prepares SMU undergraduates to be well-equipped with foundational skills needed for real estate companies and pursue opportunities in the exciting and fast-growing sector in the region.



FOCUS OF THE REAL ESTATE TRACK IN SMU IS ON INVESTMENTS AND FINANCE

What's Special about the Track?

- **Mapletree Awards**
 - ❖ S\$40,000 annually to fund up to 5 non-bonded awards of S\$8,000 each
- **Mapletree Scholarships (WEF AY2021)**
 - ❖ S\$40,000 annually to fund up to 2 non-bonded scholarships of \$10,000 each for the recipients' third and fourth years of study
- **Business Study Trips**
 - ❖ Funds available to plan and support study trips (local and overseas) to visit real estate developments, industrial estates and commercial properties
- **Internships**
 - ❖ Internships available for students to be interned in real estate companies, including Mapletree companies, REITs etc.
- **Mapletree Speaker Events**
 - ❖ Annual Real Estate Lecture
 - ❖ Occasional Real Estate Talks



Real Estate Track Curriculum Structure

Track Requirements 5 CUs

Compulsory (3 courses)

1. Real Estate Economics – Li Jing
2. Real Estate Investments & Finance – Song Changcheng / Victor Ong
3. **Risk & Regulation in Real Estate** – Edward Ti

LGST 210 will be offered every two years starting AY22/23, Jan 2023

Electives (Choose 2 courses)

- Real Estate Valuation and Taxation – Ang Sock Tiang
- Urban Economics and Policy – Ma Lin
- Real Estate Development – Josh Ng
- Project Financing – Davin Wang
- Analytics for Finance & Real Estate – Amit Kumar
- Infrastructure Economics and Policy – Phang Sock Yong (**New Course in Jan 24**)

More electives may be offered based on demand and availability of instructors. Other new electives may be developed under SMU-X

Key Events

Aug
2018

- ❖ Launch of Real Estate Track (RET)

Sep
2018

- ❖ Local Study Trip to Mapletree Business City

Oct
2018

- ❖ Study Trip to Shanghai & Hangzhou

Nov
2018

- ❖ Fireside Chat with Mapletree Group CEO
- ❖ Inaugural Mapletree Annual Lecture

Feb
2019

- ❖ Inaugural Mapletree-SMU Real Estate Forum
- ❖ Launch of SMUREAL Club

May
2019

- ❖ Study Trip to Ho Chi Minh City
- ❖ Board Members Reception with RET Student

Aug
2019

- ❖ Inaugural Mapletree Awards presentation

Oct
2019

- ❖ Study Trip to Seoul
- ❖ 2nd Mapletree Annual Lecture
- ❖ Fairmont Hotel Visit (Sg)

Nov
2019

- ❖ Corenet - Young Leader Mentor xChange

Jun
2020

- ❖ 2nd Mapletree Awards recipients announced

Oct
2020

- ❖ S-REITS talk by REITAS
- ❖ 2nd Mapletree Real Estate Forum

Mar
2021

- ❖ 3rd Mapletree Annual Lecture

Jan
2022

- ❖ 3rd Mapletree Real Estate Forum

Oct
2022

- ❖ Study Trip to Vietnam

Feb
2023

- ❖ Study Trip to Korea

Feb - Oct
2023

- ❖ Leadership Series Seminars

Dec
2023

- ❖ Study Trip to Australia

Study Trip to Shanghai & Hangzhou (7 to 13 Oct 2018)



Mapletree & VivoCity Shanghai

Study Trip to Ho Chi Minh City (5 to 10 May 2019)



Mapletree Vietnam & SC VivoCity

Study Trip to Seoul (6 to 11 Oct 2019)



Keppel Investment Management



JLL Korea



Cushman & Wakefield Korea

Study Trip to Ho Chi Minh City (2 to 7 Oct 2022)



PWC Vietnam



HSBC Vietnam

Local Trip : Hewlett Packard (HP) - 20 Oct 22

The tour hosted by HP, has helped the students better understand about the tenant-landlord relationships and the workings of commercial real estate in the real world.



Local Trip : VivoCity SC – 22 Mar 23

The FNCE231 Class went on a study trip to VivoCity Shopping Centre. During the visit and were welcomed by Ms. Gwen Au, her team, Michelle Lam, and even had the pleasure of meeting Mr. Wan Kwong Weng, who stopped by to greet the students.

Our speaker, Mr. Lai Choon Huong, gave us an insightful presentation on the Asset Enhancement Initiatives (AEI) that have been undertaken to enhance the asset value of VivoCity. We were fascinated to learn about the various AEIs implemented, such as reconfiguring retail spaces to accommodate new tenants, improving the tenant mix, and strategically adding new escalators to increase footfall in areas with less traffic.



3rd Mapletree Annual Lecture (31 Mar 2021)

Mapletree Annual Lecture (Webinar)

mapletree



Professor Melvyn Teo
Deputy Dean (Faculty and Research)
Singapore Management University



Ms Wendy Koh
Group Chief Financial Officer, Mapletree Investments Pte Ltd and
Chairman, SMU Advisory Board for Real Estate Programme



Professor Stijn Van Nieuwerburgh
E. Kazis & B. Schore Professor of Real Estate
Graduate School of Business, Columbia University



Mr Wong Mun Hoong
Regional Chief Executive Officer, Australia & North Asia
Mapletree Investments Pte Ltd



Ms Priya Kini
Managing Director and Head of Global Banking Singapore
The Hongkong and Shanghai Banking Corporation Limited

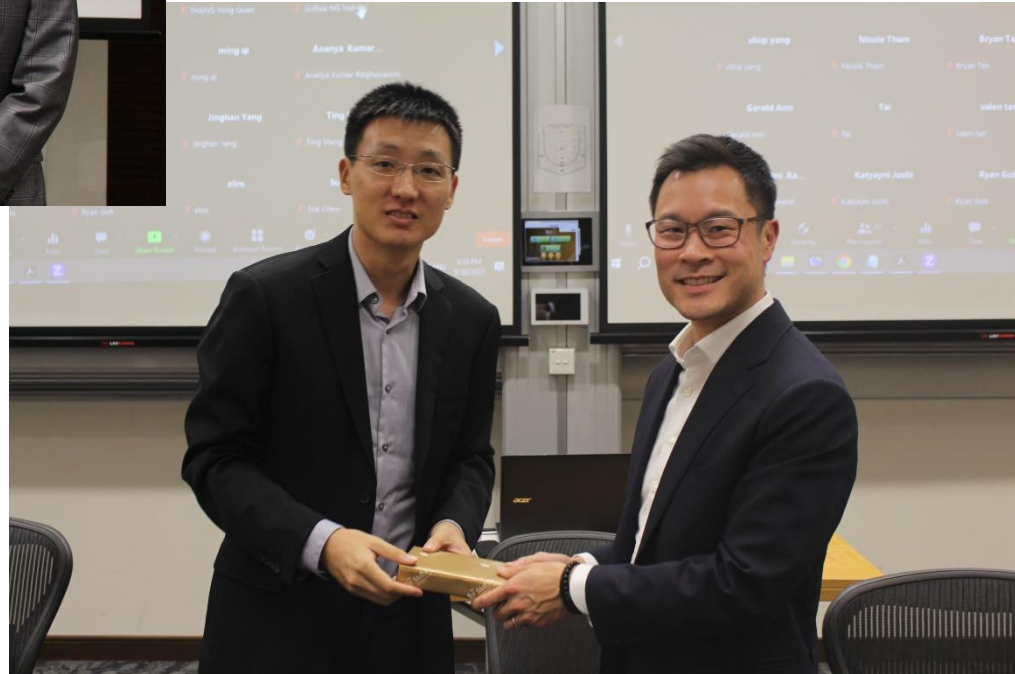
3rd Mapletree Real Estate Forum (20 Jan 2022)



Mapletree Leadership Series



(24 March 2023)



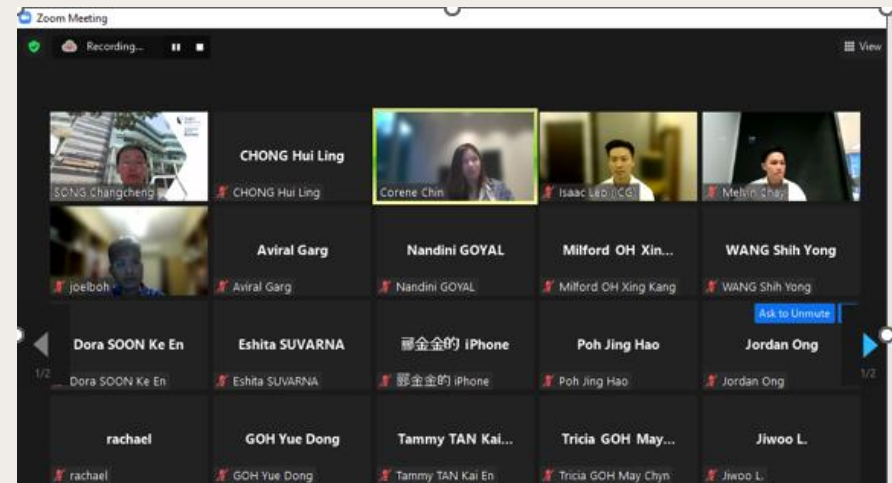
(30 August 2023)

Inaugural Career Panel – 9 March 2023

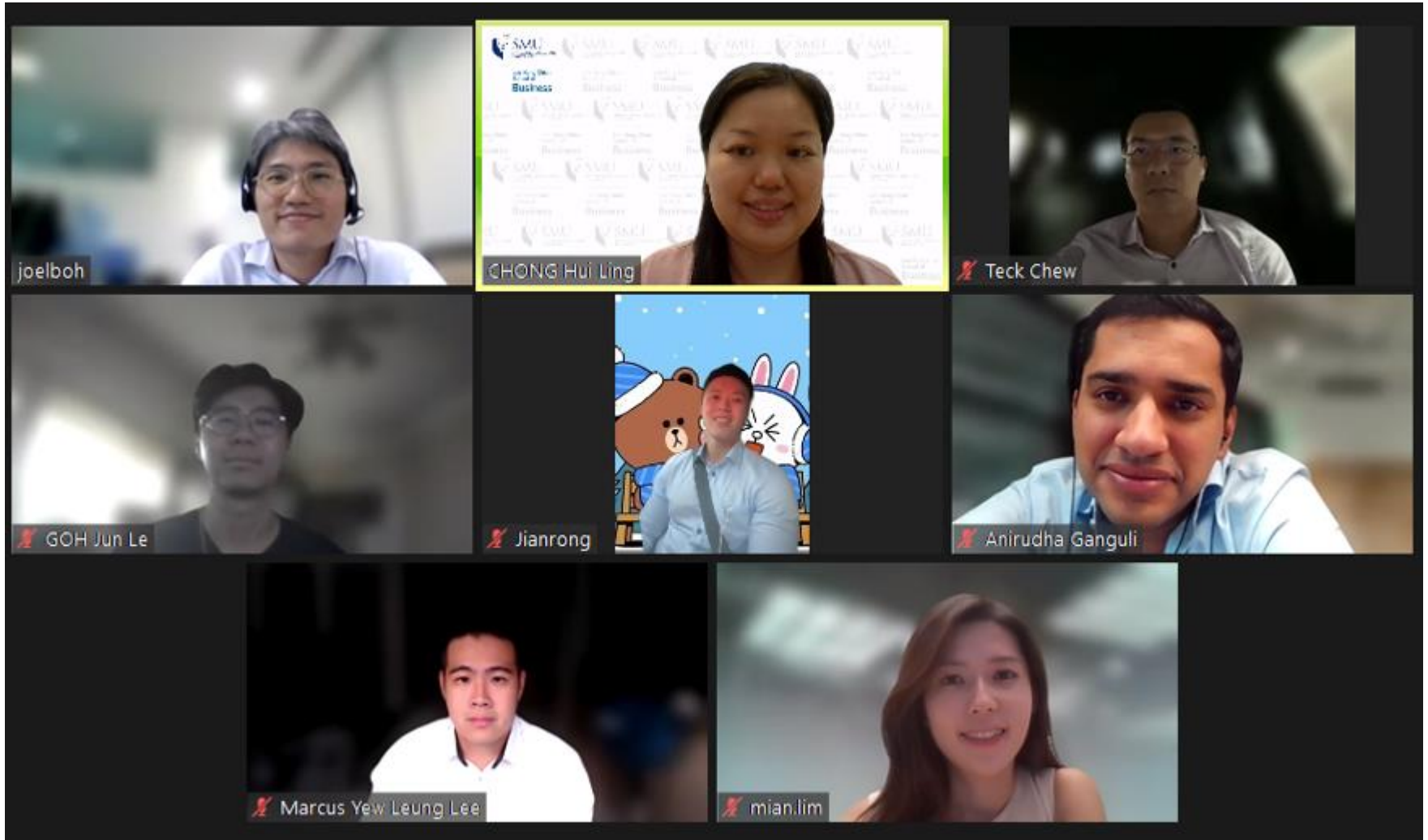
This is our inaugural SMU Real Estate Career Panel on the 9 March 2023, which we have lined up 4 speakers to share their experiences.

- (a) Corene Chin, Advisor, Ivanhoe Cambridge
- (b) Mr Melvin Chay, Director, International Capital (Asia)
- (c) Mr Joel Boh, Vice President, Corporate Development, Far East Orchard
- (d) Issac Leo, Principal, ICG Asset Management

The conversation between the panelists and the students were both interactive and very engaging. The students were very eager to ask questions and the panelists were very willing to share.



Our Second mentor-Mentee Scheme – 11 Jan 2023 (Mentor Session)



SMUREAL Club Networking Session with the Alumni

Networking Event at Southbeach Brewing Co
on 2nd May 2023.



Q & A

REAL ESTATE TRACK INFORMATION SESSION

10TH October 2023, Tuesday **SLIDO**



<https://app.sli.do/event/84Ecc4aLQka6pzxUwZVuLk/live/questions>

Contact Us

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Undergraduate Programmes

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APPENDIX

*Important dates

- **Term 2. AY 2023-24 bidding periods are as below:**
30th October 2023 – 3 November 2023 (Round 1)
3 November – 8 November 2023 (Round 1A)
8 November – 14 November 2023 (Round 1B)
8 January – 15 January 2024 (Round 2)
15 January – 22 January 2024 (Round 2A)
- **Last day to declare Real Estate track is on 7th June 2024, 12pm** (Modified Term 2 of 2023-24)
Penalty of \$10 e-dollars will be imposed if past deadline.

***Tentative Dates. Refer to OASIS >> BOSS >> Course Enrolment & Drop >> All About BOSS >> Boss Dates for more information**

SMU Real Estate Track

: CORE UNITS – Course Outline

Real Estate Investments & Finance

- ❖ Real estate investments: public and private equity; public and private debt
- ❖ Valuation of real estate properties
- ❖ Evaluation of real estate projects and developments
- ❖ Financing of real estate: public and private equity; public and private debt
- ❖ Cost of capital

Real Estate Economics

- ❖ Demand and supply of housing
- ❖ House prices and real estate cycles
- ❖ Mortgage instruments, interest rates and default risks
- ❖ Global Financial Crisis and U.S Subprime Loans
- ❖ Local housing policy

Risk and Regulations in Real Estate

- ❖ Contract law, agency law and Tort
- ❖ Property law and titles
- ❖ Contract for sale and conveyancing process
- ❖ Property taxes
- ❖ Real estate financing, property loans and mortgage process
- ❖ Personal rights and proprietary rights
- ❖ Administration of Law and Equity
- ❖ Real Estate Investment Trust

SMU Real Estate Track

: ELECTIVES – Course Outline

Real Estate Valuation & Taxation

- ❖ Various types & nature of real estate, legal Interest & characteristics of real estate market
- ❖ Needs and purpose of property valuation
- ❖ Concept of Value, Cost, Price and Market Value
- ❖ Factors that influence property values
- ❖ Rationale in the use of valuation approaches and methodologies
- ❖ Key concepts in the Property Tax, Stamp Duty, Development Charge & Compulsory Acquisition
- ❖ Property tax payable, stamp duties payable & Development Charge calculations

Urban Economics & Policy

- ❖ Formation of Cities - the economics of agglomeration
- ❖ The urban system, big & small cities, their functions & roles
- ❖ Internal spatial structure of a city & urban housing issues, including location & tenure choice
- ❖ Urban transportation – the economics of traffic congestion
- ❖ Local public goods (Tiebout Model)
- ❖ Land use optimization, public finance & housing markets (Henry George Theorem)
- ❖ The economics of urban planning

SMU Real Estate Track

: ELECTIVES – Course Outline

Real Estate Development

- ❖ Property development cycle
- ❖ Conception of the development project
- ❖ Feasibility study
- ❖ Project financing
- ❖ Project construction
- ❖ Real estate marketing
- ❖ Project completion
- ❖ Post-project management
- ❖ Exit strategies

Project Financing

- ❖ Financing of large scale projects
- ❖ Project cash flow
- ❖ Project risks
- ❖ Project structuring and term sheets
- ❖ One Belt One Road and potential for project financing

Analytics in Finance and Real Estate

- ❖ How big data can be applied in finance and real estate
- ❖ Randomized control trial, differences-in-differences, and regression discontinuity design
- ❖ Analyse cross sectional and panel data
- ❖ Machine learning methods and its application

SMU Real Estate Track

: ELECTIVES – Course Outline

Infrastructure Economics and Policy

This course will provide students with the knowledge and skills to understand key issues and challenges with respect to regulation, governance, policies and market designs for the infrastructure sector, and how these impact on businesses, consumers, the environment, and economic performance.

Course Descriptions

Course Descriptions (1)

REAL ESTATE INVESTMENTS AND FINANCE

This course focuses on real estate investments and financing from a commercial perspective. It discusses the four quadrants for investments and financing – public debt, private debt, public equity and private equity employed by institutional investors. The course will evaluate real estate investments and financing in each of the four quadrants using a variety of techniques including discounted cash flows and capitalization rates. The course will also cover real estate investment trusts (REITs) and private equity real estate funds.

REAL ESTATE ECONOMICS

This course is designed as an introductory course to study housing finance systems and housing market outcomes. It provides an overview of real estate markets as well as public policies that affect these markets. The beginning of the course will focus on what determines house price movements (captured by house price indices) and the role of real estate cycles (including bubbles) in mortgage default. The course will then be devoted to analyzing mortgage instruments used to finance investments in real estate. This includes calculations of payment streams for different types of mortgages, consideration of different types of mortgage contracts that shift interest rate and default risk between lenders and borrowers, and the role of the secondary market for mortgage securities. Equipped with aforementioned skills, students taking this course should be able to develop an eye towards the role of housing and mortgage markets in the recent financial crisis as highlighted in the United States and its potential policy implications for the local market.

Course Descriptions (2)

RISK AND REGULATION IN REAL ESTATE

This course focuses on the legal fundamentals of real estate practice and development in Singapore. While space and the built environment is ubiquitous, real estate remains a unique asset class. The rules relating to its current and future value, how it may be securely transferred from one party to another and its very definition all depend on law. The course is vital for students with an interest in real estate transactions, its development, investment and financing.

REAL ESTATE VALUATION & TAXATION

This course teaches students the use of valuation methodologies and approaches in appraising real estate for sale, acquisition, and leasing; and provides them with a good understanding of real property taxation which can have significant impact on many real estate decisions. The extensive use of examples and case studies will enhance learning and help the students to readily apply their knowledge to address the many real estate issues and challenges commonly encountered in real estate transactions, property development and property ownership.

Course Descriptions (3)

URBAN ECONOMICS & POLICY

This course is designed as an introductory course of urban economics. It covers fundamental principles developed in economics to understand the functioning/ workings of an urban economy and the various aspects of urban life. Firstly, the course begins with the definition of a city, and why cities form by introducing the economics of agglomeration, and how cities interact to form the urban system of the entire economy. These factors affect all urban phenomena. Secondly, the course analyses the internal spatial structure of a city by developing a theory of commuting, housing demand and housing production. It then analyses transportation and land/housing issues in more detail. On transportation, we focus on the economics of traffic congestions, the rationale for congestion pricing (ERP), and the so-called fundamental law of highway congestion. The discussion on land and housing, will address various housing phenomena such as tenure choice and location. The courses will discuss the optimality

Course Descriptions (4)

REAL ESTATE DEVELOPMENT

This course focuses on the real estate development cycle. The main stages of real estate development are (a) predevelopment planning, (b) project inception and roll-out, and (c) post-project management. The first stage consists of activities centred on a feasibility study and due diligence, which will include site planning and development parameters. The next stage is to commence the development, which will include site selection, investigation and evaluation, market study, project management, procurement and regulatory issues. The last stage involves implementing post-project activities including leasing or selling the property, post-construction management and yield enhancement. Each stage has business, financial and operational risks. The course will discuss the embedded activities in the value chain of real estate development for the various sectors, namely, residential, offices, industrial and commercial properties.

PROJECT FINANCING

The course focuses primarily on large projects - those costing at least USD200 million. Through this course, students will learn the mechanics of project finance and the critical success factors for such transactions, including creating value and managing risks. Students will learn how to structure a robust Project Finance Term Sheet to facilitate investment and financing decisions.

The course will include discussions on China's "One Belt One Road" Initiative ("OBOR"), and strategies to capture the opportunities arising from OBOR through Project Finance pathways. Students will also appreciate how finance, economic and political forces are interwoven into project financing especially in the Asia Pacific region.

Course Descriptions (5)

ANALYTICS IN FINANCE AND REAL ESTATE

This course is to help students to apply the econometrics theory with data in finance and real estate in the real world. It will be empirically oriented, with an emphasis on causal identification using various methods such as randomized control trial, differences-in-differences, and regression discontinuity design. This course will focus on applied econometric issues with cross section and panel data. This course will also introduce machine learning methods and its application in finance and real estate

INFRASTRUCTURE ECONOMICS AND POLICY

This course is designed to provide students with an understanding of the theory and practice of the economics of infrastructure provision, regulation, and policy. The first section of the course will deal with reform and governance in the infrastructure sectors and the rationale for privatization and public-private partnerships (PPPs). The theoretical component will cover the rationale for economic regulation, the choice of regulatory instruments, pricing and subsidies, design of markets, regulatory institutions and PPPs. The analysis of these issues will be applied to several infrastructure sectors including water, telecommunications and the internet, transportation, and electricity. The infrastructure sector is increasingly prominent on the sustainability agenda with the adoption of net-zero emissions targets by over 100 countries and large corporations. The course will also discuss policy options and challenges for the transition to net-zero emissions. Relevant case studies will also be used to illustrate the application of economic principles to policy in specific sectors and contexts.

Thank you

