Creative Real Estate Financing

Outline of Presentation

- Traditional real estate financing
  - Leverage
  - Pre-complete sales
- Motivations for creation of secondary mortgage market
- Real estate backed securitization
  - Mortgage Backed Securitization
  - Real Estate Asset Backed Securitization
- Divestment strategy – REITs
- Conclusion
Real Estate Asset Market

- Market for ownership of real estate assets
- Assets consist essentially of claims of future cash flows (e.g., rents generated from building, mortgage payments)
- Part of larger capital market
- Composition of capital market
  - Private vs Public market
  - Debt vs Equity
- Differentiating Features
  - Information efficiency & liquidity
  - Priority / residual claims & finite / infinite live
  - Management control & upside potential

Source of Real Estate Funds

- Shareholders Equity
  - Limited / General Partnership
  - Joint Venture
  - Syndication
- Shareholders Loan (Mezzanine Debt)
- Debt / Bank Loan
- Capital Market Funding
  - Corporate bonds
  - Equity / Debt instruments
  - Secondary real estate transactions
Traditional Private Market Financing Through Banks

- Limited Liability Company
- Partnership

Private Equity

Project & Construction Loan

Developer

Supply Side: Land acquisition Construction

Banker

Demand Side: Pre-sale/ Strata unit Leasing & Vacancy

Households

Real Estate Space Market Activities

Why use debt financing?

- Insufficient capital / equity
- Diversification: Even if investor has sufficient capital, he/she may wish to use debt financing and spread equity over several investments for diversification.
- Tax benefits
- Potential benefit associated with financial leverage
Effect of leverage on NPV

- Initial capital/equity is reduced.
- Monthly payment / cash flow is reduced.
- But the equity investor reaps any appreciation in price of property.
- With debt financing, the investment is now profitable!

Formula (Before Tax)

\[ IRR_E = IRR_p + (IRR_p - IRR_D) \frac{D}{E} \]

- \( IRR_E \) = IRR on equity invested
- \( IRR_p \) = IRR on total investment in property (debt + equity)
- \( IRR_D \) = IRR on debt (effective cost of loan)
- \( D/E \) = debt to equity ratio

- As long as \( IRR_p \) is greater than \( IRR_D \), then \( IRR_E \) will be greater than \( IRR_p \).
- The greater the amount of debt (higher D/E), the higher will be \( IRR_E \)
Effect of L/V on IRR(equity)

Progress Payment from Pre-completion sales

- Developers may market projects before completion.
- In Singapore, developers can only begin marketing after the building plan approval is obtained.
- Purchasers who commit to purchase are required to pay progressively according to the stage of completion of the project.
Implications for Developers

- Developer’s cash flow can be improved in that inflow from progress payments can be channeled toward construction costs.
- Developer can reduce interest costs.
- Developer can lock in sale price.
- Progress payments provide interest-free financing!

Public Market Financing for Real Estate Activities

Real Estate Space Market Activities

Supply Side:
- Land acquisition
- Construction

Demand Side:
- Leasing & Vacancy
- Enbloc Sale

Institutional Investors

Stock Market Equity

Debt/Bond Issues

Insurance, Pension Funds

Capital Market Activities
Real Estate Backed Securitization

What is Securitization?

- **Securitization** is a process of turning equity interest in real estate, which is illiquid and lumpy, into tradable securities such as bonds and shares.
- **Securitization** is an open market selling of financial instrument backed by asset cash flow or asset value.
- A contractual arrangement whereby real estate owners sell their real estate asset(s) to a special purpose vehicle (SPV).
- SPV issues debt instruments (bonds) to finance the purchase.
The trend that can be observed on the financial markets can be described as a shift from credit to capital markets, i.e., desintermediation of lending institutions. Desintermediation of lending institutions for two reasons:

- Firstly: a lot of big commercial banks have decided to go away from the classic lending business and go into fee income business, because due to a lot of bad loans the banks cannot hold on to their ROE targets.
- Secondly: Through desintermediation the bank's lending spread can be distributed to the borrower and the capital market investors.

Source: Marc Breidenbach, European Business School, 2003

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**Classification Real Estate Capital Assets**

<table>
<thead>
<tr>
<th>Asset Type</th>
<th>Private Market</th>
<th>Public Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity</td>
<td>Direct ownership of property</td>
<td>Stocks</td>
</tr>
<tr>
<td></td>
<td>Equity interest in holding companies</td>
<td>Listed property stocks</td>
</tr>
<tr>
<td></td>
<td>Unlisted Property Trusts</td>
<td>Real Estate Investment Trusts (REITs) – CMT, Fortune, A-REIT</td>
</tr>
<tr>
<td></td>
<td>Property Funds</td>
<td>Mortgage REITs</td>
</tr>
<tr>
<td>Debt</td>
<td>Commercial mortgages</td>
<td>Mortgage backed securities</td>
</tr>
<tr>
<td></td>
<td>&quot;whole&quot; loans</td>
<td>Government/ Corporate Bonds</td>
</tr>
<tr>
<td></td>
<td>Long-term / synthetic Leases (?)</td>
<td>ABS/Commercial RE backed Bonds</td>
</tr>
</tbody>
</table>
Mortgage Pass-Through Securities – Issuance & Fund Flow

Primary Lenders/ Mortgage Suppliers: Mortgage companies Thrifts/Commercial Banks Finance Companies & Others

Create Mortgage Pools

Secondary Mortgage Agencies/ Institutions: FNMA / FHLMC

Issue MBS securities

Security dealer: Underwriting & Security sales

Investors’ source of funds

MBS investors: Life insurance companies, pension funds, banks & others

Mortgage Sales

Funds flow

Securities sales

Types of Mortgage Related Securities

- Mortgage Backed Bonds
- Mortgage Backed Securities (Pass-throughs)
- Mortgage Pay-through Bonds
- Collateralized Mortgage Obligations (CMO)
- Commercial Mortgage Backed Securities
Real Estate / Asset Backed Securitization (ABS) in Singapore

Asset-Backed Securitization in Singapore

- What is Asset-Backed Securitization (ABS)?
- A creative financing arrangement
- Structure of asset-backed securitization
- Embedded options in the deals
- First transaction: Neptune Orient Building, Alexander Road
- Six commercial properties have been securitized with net asset value of $1.82 billion
- Significance of the Option Values
Asset-Backed Securitization Deals in Singapore

<table>
<thead>
<tr>
<th>Issue Date</th>
<th>Property</th>
<th>Owner</th>
<th>Market Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar 99</td>
<td>Neptune Orient Line HQ</td>
<td>NOL</td>
<td>$185 mil.</td>
</tr>
<tr>
<td>Jun 99</td>
<td>Century Square Shopping Mall</td>
<td>First Capital Corporation</td>
<td>$200 mil.</td>
</tr>
<tr>
<td>Jul 99</td>
<td>Robinson Point</td>
<td>DBS Land</td>
<td>$193 mil.</td>
</tr>
<tr>
<td>Sep 99</td>
<td>268 Orchard Road</td>
<td>DBS Land</td>
<td>$184 mil.</td>
</tr>
<tr>
<td>Nov 99</td>
<td>Tampines Centre</td>
<td>DBS Land</td>
<td>$180 mil.</td>
</tr>
<tr>
<td>Nov 99</td>
<td>Six Battery Road</td>
<td>DBS Land</td>
<td>$878 mil.</td>
</tr>
<tr>
<td>Sep 00</td>
<td>Willy Residence *</td>
<td>Tan Chong International</td>
<td>$146 mil.</td>
</tr>
</tbody>
</table>

Other Asset Backed Securitization Deals in Singapore

- **Raffles City – Tinsel**
  - June 2001
  - $984.5 million – 10 year bonds
  - 5% snr bond & 7.4% junior bonds
- **Wisma Atria**
  - May 2002
  - $451 million – five year fixed rate bonds – 3 tranches
  - 4.94% Snr bond, 7% Jnr A bond & 8.85% jnr B bond
- **Compass Point Shopping Centre – Fraser & Neave Ltd**
  - Nov 2002
  - $335 million – 10yr fixed rate bonds
  - 4.88% snr & 8.0% jnr bonds
Securitization Process

- Open market valuation of property to be securitized
- Off-the-balance-sheet transfer of ownership rights to the SPV – an enbloc sales
- Embedded options:
  - Lease back option
  - Buy-back option (65-75% off market value)
  - Put-option to sell back property to originator
- SPV finances the purchase by issuing secondary market instruments: bonds and preferential shares
- Fixed coupon payment to investors from rental & other revenues generated from the building
- Partial sharing of capital appreciation if option is exercised within the maturity period

Structure of Asset-Backed Securitization
Structure of A Typical Securitization Deal

- Sale and Purchase Agreement
- Option Agreement
- Proceeds
- Issues Bonds and Preference Shares
- Dividend
- Investors
- 10-year lease
- Rental
- Birchvest Investments Pte Ltd (wholly owned subsidiary of DBS Land)
- Robinson Point Pre Ltd
- Robinson Point Building
- Visor Limited (Special Purpose Vehicle)

CMBS in Singapore
Commercial Mortgage Backed Securitization (CMBS)

- Securitizing non-recourse commercial mortgages
  - Which include office, retail malls, multi-family apartments, hotels, warehouses and factories
- Quality of properties, geographic regions and creditworthiness of tenant are important in assessing the risk of CMBSs
- Two major classes of debt securities: senior tranche and subordinated tranche
- Different priority of claims
- Little or no principal payments or prepayments are likely for CMBS pool
- “Lockouts” prevent prepayment for a specified number of years
- Commercial mortgages often have a “balloon payment” that is due before the loan is fully amortized
- In the US, the CMBS market expanded rapidly from US$4.9 billion in 1989 to US$27.2 billion in 1996 (Harding and Sirmans, 1997)

**Structure of CRS-CMBS in Singapore**

- Loans to respective trusts secured on properties

**CMBS Issuer:** CapitaRetail Singapore (CRS)

**Asset Manager:** CapitaRetail Singapore Management Pte Ltd

**Property Manager:** CapitaLand Retail Management Pte Ltd

**Secured Floating Rate Class A Bonds in €**

**Secured Floating Rate Class B Bonds in €**

**Secured Fixed Rate Class C Bonds in $S**

**Secured Fixed Rate Class D Bonds in $S**

**Secured Fixed Rate Class E Bonds in $S + Preference Shares**

**Cross Currency Swap for Class A & Class B bonds**

**Interest Rate Swap for Class C & Class D bonds**

**Oversea-Chinese Banking Corporation (OCBC)**

**BNP Paribas (Singapore branch)**

**Dexia Trust** (Security & Bond Trust)

**CapitaRetail BPP Trust**

**CapitaRetail Rivervale Trust**

**CapitaRetail Lot 1’Trust**

**Bukit Panjang Plaza**

**Rivervale Mall**

**Lot One Shoppers Mall**

**Source: Author**
Three Collateralized Properties in CRS CMBS

<table>
<thead>
<tr>
<th>Property</th>
<th>Property Type</th>
<th>Location</th>
<th>Net Lettable Area (sqm)</th>
<th>Tenure</th>
<th>Year of completion</th>
<th>Mortgage Loan (S$)</th>
<th>Independent Valuation (S$)</th>
<th>Loan to Value (L/V) Ratio</th>
<th>Projected Yield#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rivervale Mall</td>
<td>Retail</td>
<td>Sengkang New Town</td>
<td>7,499</td>
<td>99-year w.e.f 6 Dec 1997</td>
<td>Early 2000</td>
<td>$40,674,000</td>
<td>$67,800,000</td>
<td>60%</td>
<td>6.40%</td>
</tr>
<tr>
<td>Lot One Shoppers Mall</td>
<td>Retail</td>
<td>Choa Chu Kang</td>
<td>19,327</td>
<td>99-year w.e.f 1 Dec 1993</td>
<td>End 1996</td>
<td>$151,956,000</td>
<td>$253,300,000</td>
<td>60%</td>
<td>6.00%</td>
</tr>
<tr>
<td>Bukit Panjang Plaza</td>
<td>Retail</td>
<td>Bukit Panjang</td>
<td>13,572</td>
<td>99-year w.e.f 1 Dec 1994</td>
<td>End 1996</td>
<td>$100,544,000</td>
<td>$167,600,000</td>
<td>60%</td>
<td>6.10%</td>
</tr>
</tbody>
</table>

|                  |               |                  |                         |              |                    |                    |                          |                        |                  |
|                  | 40,997        |                  | $295,174,000            | $488,700,000 |

N.B. w.e.f denotes "with effect from"
% Independent valuation reported by CB Richard Ellis Pte Ltd
# Based on acquisition price

Source: Authors’ compilation from information in CapitaLand Limited, Moody’s and Standard & Poor’s reports

CMBS Case – CapitaRetail Singapore (CRS)

- CRS issues 4-year CMBS with 5 different classes and in two different currency denominations:

<table>
<thead>
<tr>
<th>Issue Value</th>
<th>Interest Rate</th>
<th>Moody’s</th>
<th>Standard &amp; Poor’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class A</td>
<td>Floating rate</td>
<td>Aaa</td>
<td>AAA</td>
</tr>
<tr>
<td>€67.5 million</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class B</td>
<td>Floating rate</td>
<td>Aa2</td>
<td>AA</td>
</tr>
<tr>
<td>€13.5 million</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class C</td>
<td>Fixed rate</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>$33.0 million</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class D</td>
<td>Fixed rate</td>
<td>Not rated</td>
<td>Not rated</td>
</tr>
<tr>
<td>$83.0 million</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class E</td>
<td>Fixed rate</td>
<td>Not rated</td>
<td>Not rated</td>
</tr>
<tr>
<td>$213.0 million</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Moody’s and Standard & Poor's

- Schedule maturity 27 February 2008, with possible extension of 18 months
- Mortgages on three properties: Bukit Panjang Plaza, Lot 1 Shoppers Mall and Rivervale Mall (Table 4)
- Loan-to-value ratio = 60%
- CMT subscribe 30% of the junior E-tranche and expected a yield of min. 8.2%
Real Estate Investment Trusts (REITs)

Emergence of REITs in Singapore

- In Singapore, the idea of creating a REIT, which was first mooted by the Property Market Consultative Committee in 1986.
- It has finally come into fruition in July 2002 following the successful launch of the maiden CapitaMall Trust (CMT) by the listed property giant CapitaLand.
- Ascendas rode on the strong momentum created by CMT and followed up with its Ascendas REIT (A-REIT) launch on 19 November 2002.
- The two REITs have obtained tax transparency status at the corporate level from the Inland Revenue Authority of Singapore (IRAS)
- The forecasted yields of 7% and 8% for CMT and A-REIT respectively have also been an important factor underpinning the 5 times over-subscription when REIT tested the equity market on their debuts.
### Market Capitalization of Singapore REITs

<table>
<thead>
<tr>
<th>REIT</th>
<th>Initial Public Offer (IPO)</th>
<th>Current Price@</th>
<th>Current Market @</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>date</td>
<td>Unit issued</td>
<td>Issued Price (S$/sh)</td>
</tr>
<tr>
<td>CapitaMall Trust</td>
<td>17 Jul 2002</td>
<td>0.96</td>
<td>204.5</td>
</tr>
<tr>
<td>Ascendas REIT</td>
<td>19 Nov 2002</td>
<td>0.88</td>
<td>239.8</td>
</tr>
<tr>
<td>Fortune REIT*</td>
<td>12 Aug 2003</td>
<td>HK4.75</td>
<td>234.9</td>
</tr>
<tr>
<td>CapitaCommercional Trust</td>
<td>11 May 2004</td>
<td>1.74*</td>
<td>N/A</td>
</tr>
<tr>
<td>Suntec REIT</td>
<td>9 Dec 2004</td>
<td>1.00</td>
<td>722</td>
</tr>
</tbody>
</table>

* Net Asset Value per unit  #MV for A-REIT (A) share  @price & market value as at 30 December 2004

### Singapore REITs

<table>
<thead>
<tr>
<th>REIT</th>
<th>Sponsoring Developer</th>
<th>REIT Manager</th>
<th>Date of Listing (Trading)</th>
<th>Initial Public Offering (IPO) Size($)</th>
<th>Aggregate Appraised Value of Asset</th>
<th>Market Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>CapitaMall Trust</td>
<td>CapitaLand</td>
<td>CapitaMall Trust Management Ltd</td>
<td>21-Jul-2002</td>
<td>US$135.9 million (S$235.2 million)</td>
<td>S$805 million</td>
<td>Retail</td>
</tr>
<tr>
<td>Ascendas REIT</td>
<td>Ascendas, Macquarie Goodman</td>
<td>Ascendas-MGM Funds Management Ltd</td>
<td>19-Nov-2002</td>
<td>US$159.8 million (S$275.8 million)</td>
<td>S$807.2 million</td>
<td>Industry/ Business/ Science Parks</td>
</tr>
<tr>
<td>Fortune REIT</td>
<td>Cheung Kong (Holdings) Limited</td>
<td>ARA Asset Management (Singapore) Limited</td>
<td>12-Aug-2003</td>
<td>US$118.4 million (HK$105 million/ S$248.8 million)</td>
<td>S$740.9 million</td>
<td>Retail (Hong Kong)</td>
</tr>
<tr>
<td>CapitaCommercional Trust</td>
<td>CapitaLand</td>
<td>CapitaCommercial Trust Management Ltd</td>
<td>17-May-2004</td>
<td>US$98.8 million (S$1,485.8 million)</td>
<td>S$2,016.5 million</td>
<td>Commercial property, which include office, carparks and retail</td>
</tr>
<tr>
<td>Suntec REIT</td>
<td>Suntec City Development Ltd</td>
<td>ARA Trust Management (Suntec) Limited</td>
<td>9-Dec-2004</td>
<td>US$418.3 million (S$772 million)</td>
<td>S$2,150 million</td>
<td>Single integrated commercial development</td>
</tr>
</tbody>
</table>

Sources: IPO prospectus
Asset Requirements of Singapore REITs (S-REITs)

- 35% of the property fund’s total assets must be invested in real estate
- 70% of the property fund’s total assets must be invested or proposed to be invested in real estate and real estate-related assets
- Real estate
  - Freehold or leasehold, sole or joint owner, in or outside Singapore
  - Residential property act
- Real estate-related assets
  - Listed or unlisted debt securities and listed shares of or issued by property companies, mortgage backed securities, other property funds, and assets incidental to the ownership of real estate (e.g. furniture)
- A property fund may invest in local and/or foreign assets subject to the terms of its memorandum and articles of association
- A property fund may invest in local and/or foreign property funds (subject to investment limits)

Income Distribution Requirements and Tax Transparency of S-REITs

- The Inland Revenue Authority of Singapore (IRAS) has issued a tax ruling on the taxation of S-REITs for income earned and expenditure incurred after its public listing
- Waiver from tax deduction at source on distribution is termed “tax transparency”
- The condition for tax transparency granted to S-REITs has changed from the previous 100% distribution to not less than 90% income distribution since December 2002
- In 2002, tax transparency status is also extended to include Singapore permanent residents who are tax residents in Singapore and other non-corporate Singapore constituted or registered entities such as town council and statutory boards
Yield Driven Instruments

Notes:

(1) Domestic interbank overnight interest rate as at June 2003. (Source: MAS Website)
(2) As at 30 June 2003. Source: MAS Website
(3) Based on CPF Ordinary Account from April to June 2003. (Source: CPF Website)
(4) Source: Bloomberg data as at 30 June 2003
(5) Based on A-Reit Market Price - $0.95 as at 30 June 2003
(6) Based on CMT Market Price - $1.15 as at 30 June 2003

Conclusion

- Securitization and financial engineering technology has changed the way real estate financing is being arranged in the market
- Efficient and optimal financing will have significant implications for the returns of real estate development and investment
- Is Capital Structure “irrelevant”?
- More research to evaluate risks and structure of the secondary market innovations
Thank you

Question & Answer