

Professor Sock-Yong PHANG

Sock-Yong Phang is the Celia Moh Chair Professor of Economics at the Singapore Management University (SMU). Her research interests are in housing, transportation and infrastructure economics and she has authored the following books: *Policy Innovations for Affordable Housing in Singapore* (Palgrave Macmillan, 2018); *Housing Finance Systems: Market Failures and Government Failures* (Palgrave Macmillan, 2013); and *Housing Markets and Urban Transportation* (McGraw Hill, 1992). She has also published numerous book chapters and journal articles on housing, transport, regulation, and public-private partnerships.

At SMU, Professor Phang was Vice Provost for Faculty Matters (2015-2020) and was Program Director for the “Growing Infrastructure” executive program (2020-2023) which was jointly developed by SMU, Infrastructure Asia and the World Bank.

In addition to her work at SMU, Professor Phang has served as consultant to the World Bank, the Asian Development Bank and various government agencies on projects involving land, housing, and infrastructure policies. In Singapore, Phang has previously served as board member of the Urban Redevelopment Authority, the Land Transport Authority, the Public Transport Council, the Competition and Consumer Commission, and the Energy Market Authority.

Professor Phang received her Ph.D. in Economics from Harvard University in 1989.

Strategic Land Use Planning: Insights from Singapore

Sock-Yong Phang
Professor of Economics
Singapore Management University

Hawaii Community Development Authority

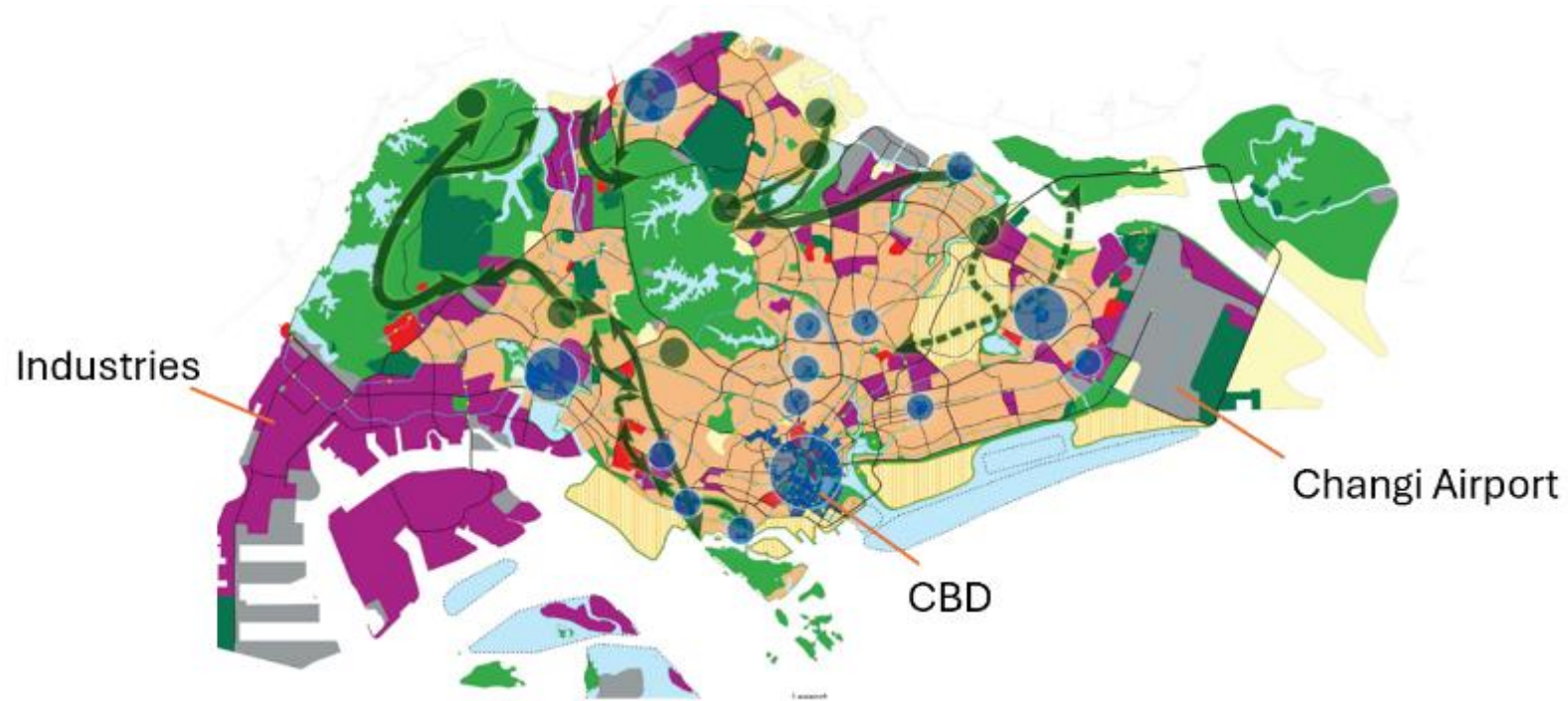
4 Sep 2024

Outline

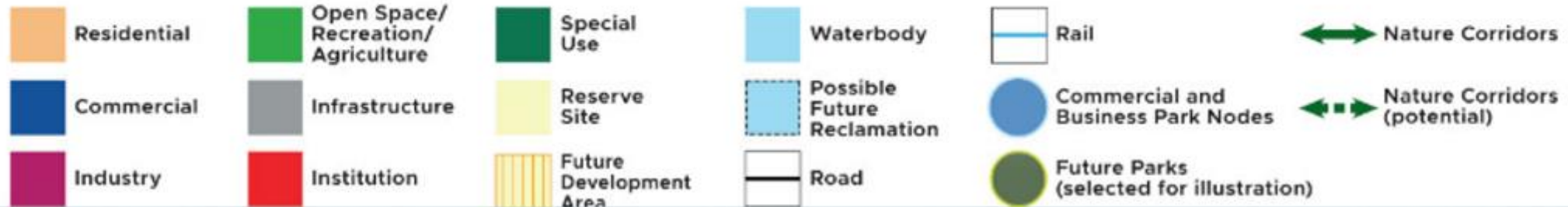
- **Background** on Singapore
- **Land** policies
- **Housing** policies
- **Government land sales**
- **Fiscal implications** of land value capture

Exchange rate S\$1 ~ US\$0.76

Population 5.9 million, Land area 734 km²

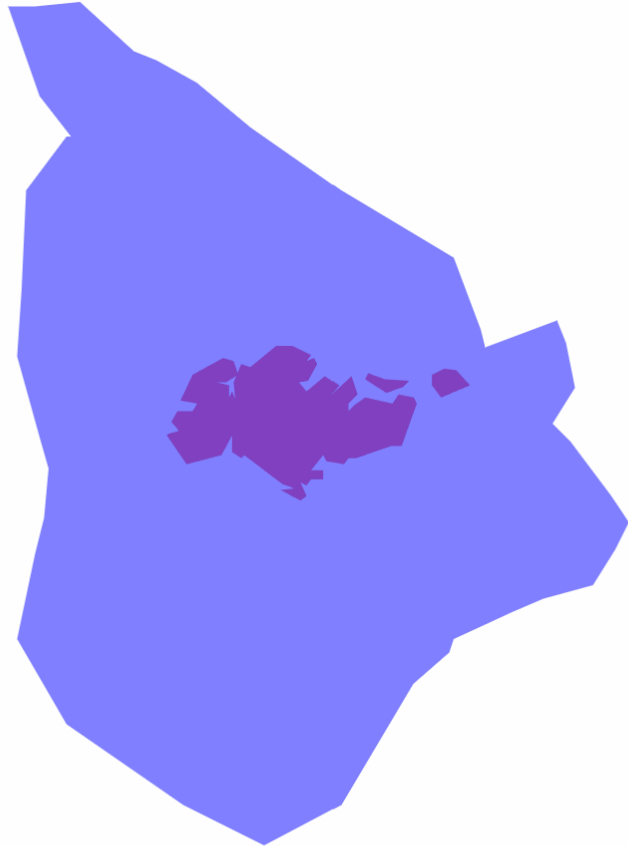


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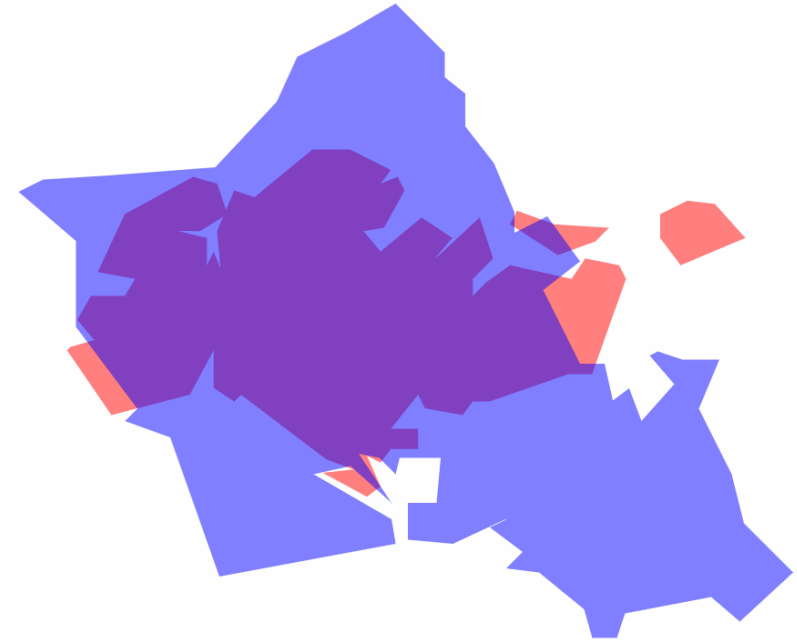


Source for image: URA

Hawaii Population 1.4 million, Land area 28,311 km²



Hawaii (island) is **15 times** as big as Singapore



Oahu (Hawaii) is **2.16 times** as big as Singapore

Source:

<https://mapfight.xyz/map/sg/#hawaii>

<https://mapfight.xyz/map/sg/#oahu>

Land Acquisition Act 1966

- Gives the state broad powers to acquire land for
 - (a) for any public purpose;
 - (b) by any person, corporation or statutory board, for any work or an undertaking which, in the opinion of the Minister, is of public benefit or of public utility or in the public interest; or
 - (c) for any residential, commercial or industrial purposes.
- Landowners cannot object to decisions
- Appeals on compensation to be made to Appeals Board and not to courts

> 90% State Land

Year	% of total land
1960	44%
1965	49%
1970	57%
1975	66%
1980	70%
1985	76%
By 2005	90%



Reclaimed land has increased Singapore's land area by **> 25%** since independence

Source for image: <https://biblioasia.nlb.gov.sg/vol-13/issue-1/apr-jun-2017/land-from-sand/>

Land Use Planning

- 1958 Master Plan modelled after Greater London Plan of 1944
- 1959 Planning Act provided for Master Plan revision every 5 years,
& exemption of public sector projects
- 1964 Amendment to introduce **Development Charge**
(currently 70% of increment in land value)
- 1971 **Concept Plan** to guide long term land use
- 1990 Change in planning approach from passive updating to guidance on permissible land use and density for developments in Singapore.
- Long-Term Plan for next 50 years – reviewed regularly
- Master Plan for next 10 to 15 years- reviewed every 5 years

Land use planning process

Land use planners proposed amendments to the Master Plan:

- (a) Change in zoning.
 - (b) Change of plot ratios.
 - (c) Designation of conservation areas.
 - (d) Change of the Master Plan Written Statement, etc.
- Proposals are exhibited for public inspection and comments.
 - Proposals are submitted to Minister for approval, after which, the amendments are incorporated into the Master Plan.
 - The Master Plan is supported by Special and Detailed Control for specific areas (non-statutory)
 - To bring the plans to reality, state land is then either allocated to state agencies or released for private development through the Government Land Sales program.

Homeownership rate ~ 90%



Tampines Town

Source for image: HDB

Housing & Development Board

71% of housing units

94% sold, 6% rental

Leasehold 99 years

Private high-rise **24%**
(freehold and leasehold)

Private landed **5%**
(mostly freehold)

Most common house type: HDB 4-room flat, 99-year lease, ~ 970 sq ft



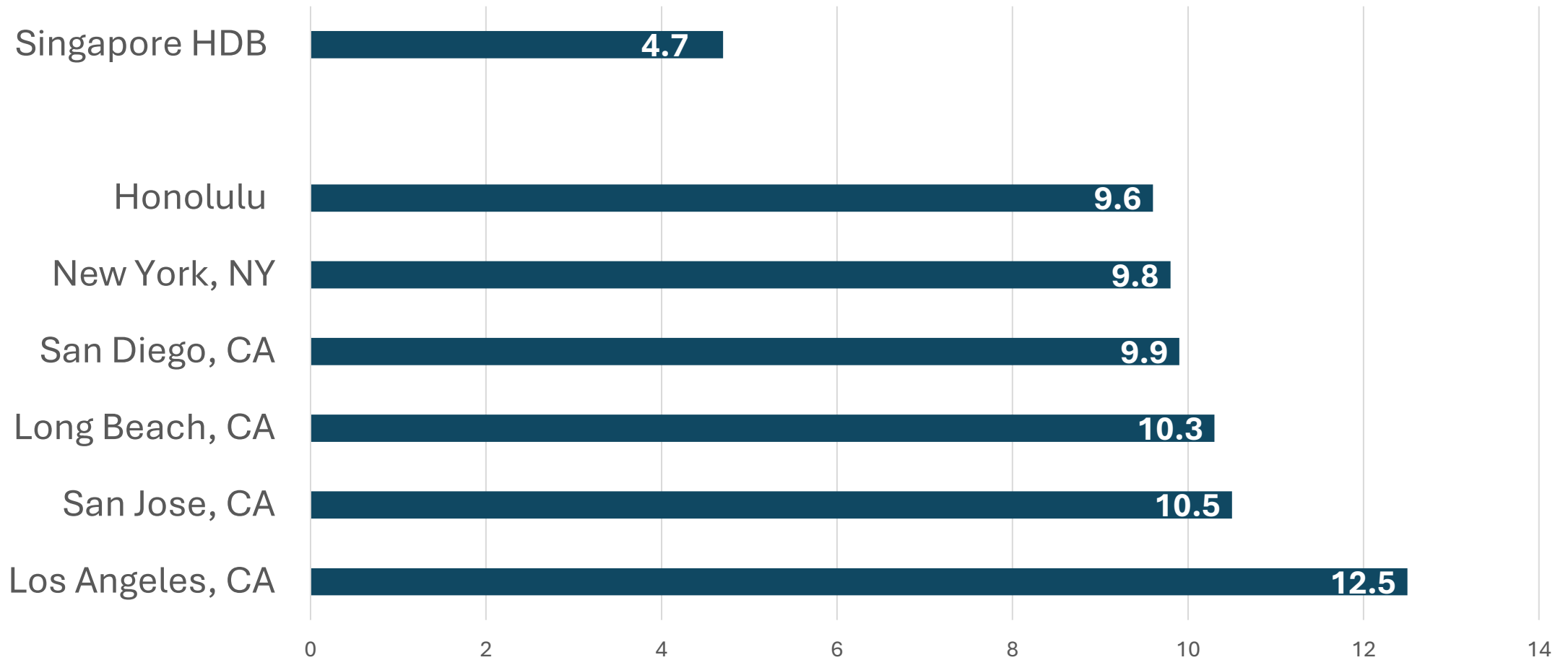
Punggol Town

Market price
~S\$633,000

Subsidised price
~S\$313,000

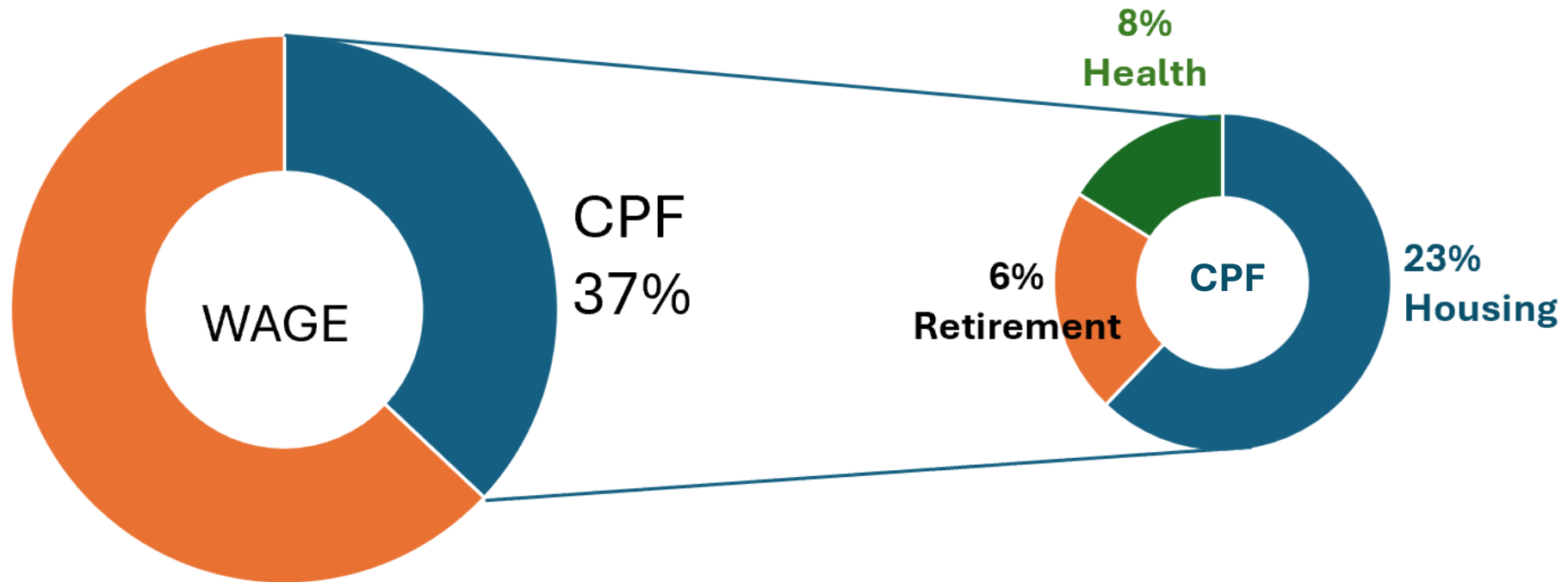
Source for image: HDB

House Price to Household Income Ratios 2022



Sources for data: Singapore: https://asia.uli.org/wp-content/uploads/2023/05/ULI-Home-Attainability-Index-report_-28-May-Finalised.pdf; US cities: <https://constructioncoverage.com/research/cities-with-highest-home-price-to-income-ratios>

Mandatory CPF savings

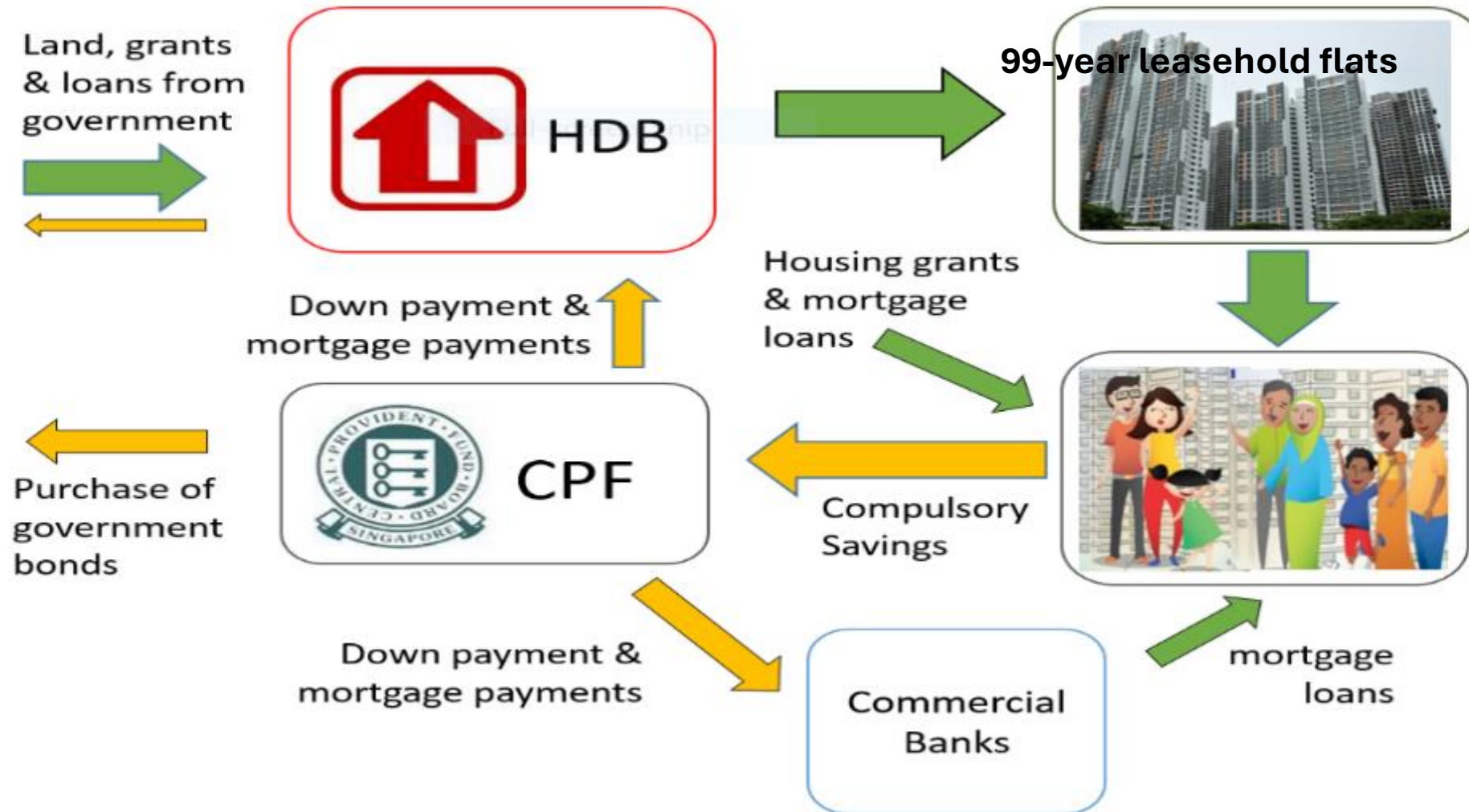


**2022 CPF contributions:
6.5% of GDP**

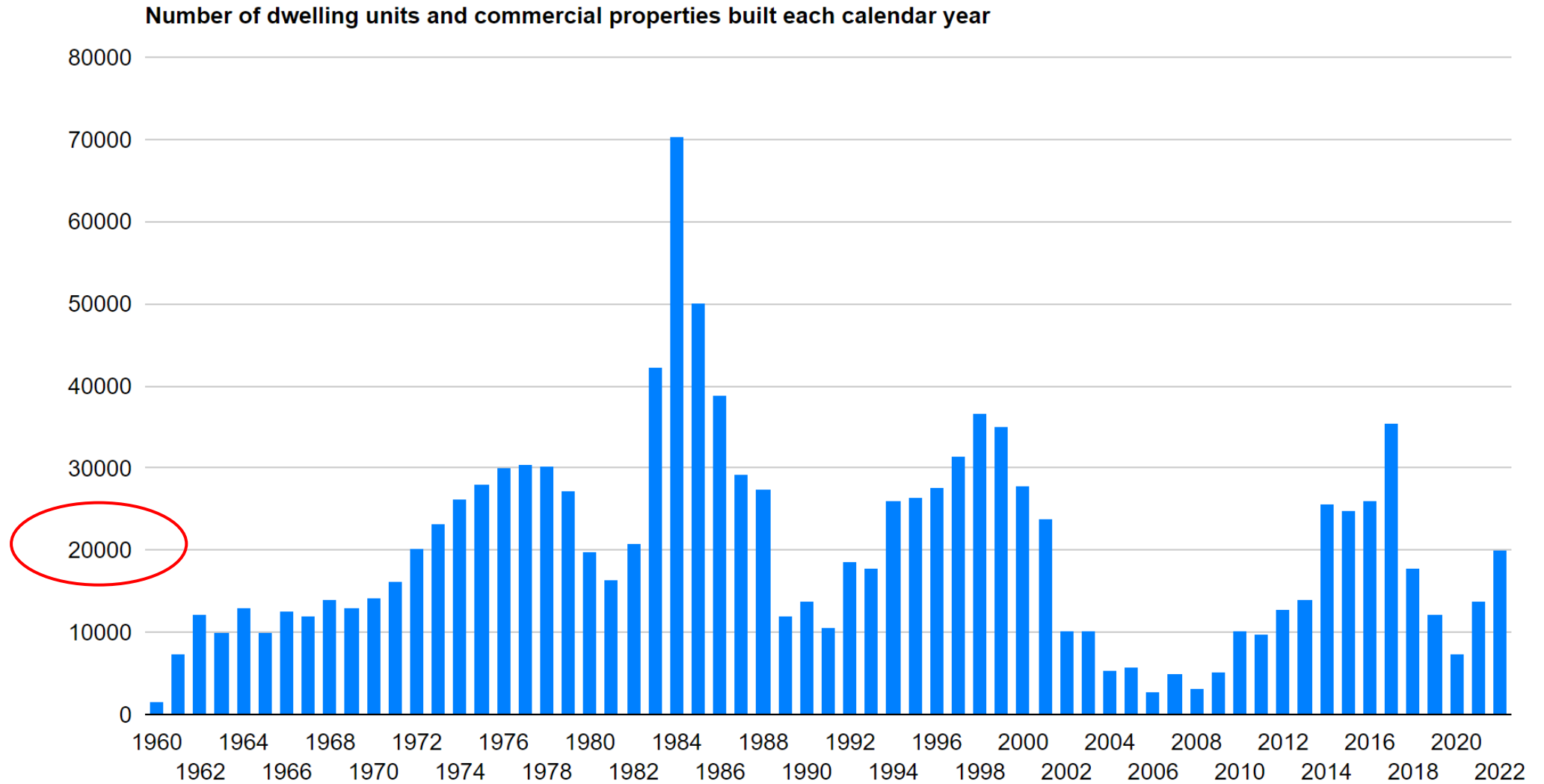
**2022 CPF withdrawals
for housing: 3.2% of GDP**

Housing

Central Provident Fund savings for housing finance



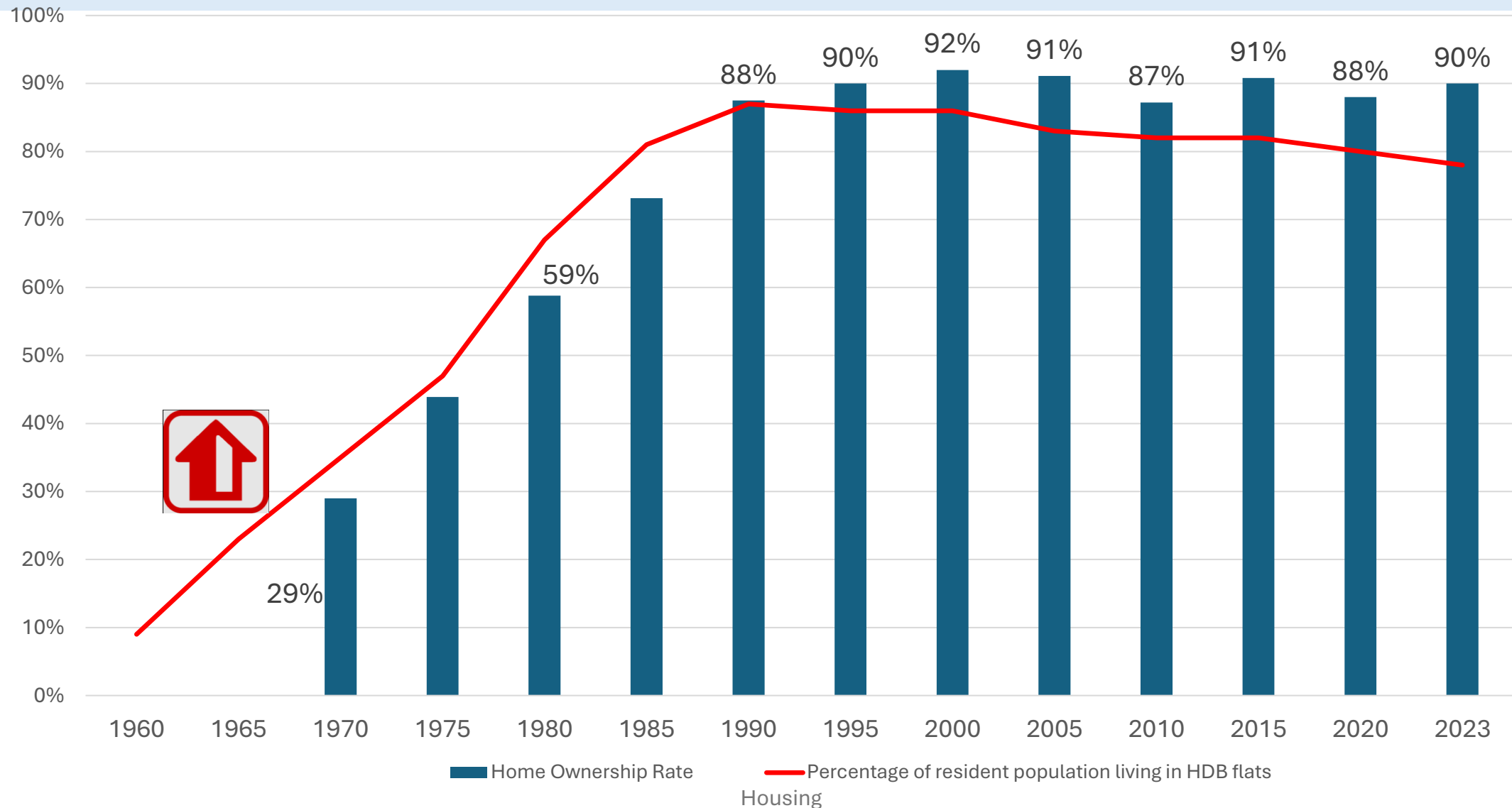
HDB building statistics



Housing

Source for chart: <https://www.tealida.com/singapore/hdbstatistics/>

Homeownership and HDB population



Pricing for affordability

Flat Prices in February 2024 BTO Exercise

Town	Project	Flat Type	Selling Price (Excluding Grants)	Net Prices (Including Grants ^)	Market Prices (Transacted Prices of Resale Flats Nearby #)
Punggol	Matilda Riverside	2-room Flexi	From \$131,000	From \$51,000	\$325,000 - \$360,000
		3-room	From \$242,000	From \$167,000	\$425,000 - \$455,000
		4-room	From \$318,000	From \$258,000	\$530,000 - \$605,000
		5-room	From \$464,000	From \$419,000	\$650,000 - \$745,000

^ For illustration purposes, the assumed **Housing Grant amounts** are:

- 2-room Flexi flat: \$80,000
- 3-room flat: \$75,000
- 4-room flat: \$60,000
- 5-room flat: \$45,000

**Average discount from market prices
~ \$300,000 per household**

Housing grants for first time homeowners

Household monthly income	Enhanced Housing Grant
≤\$1,500	\$120,000
\$1,501 - \$2,000	\$110,000
\$2,001 - \$2,500	\$105,000
\$2,501 - \$3,000	\$95,000
\$3,001 - \$3,500	\$90,000
\$3,501 - \$4,000	\$80,000
\$4,001 - \$4,500	\$70,000
\$4,501 - \$5,000	\$65,000
\$5,001 - \$5,500	\$55,000
\$5,501 - \$6,000	\$50,000
\$6,001 - \$6,500	\$40,000
\$6,501 - \$7,000	\$30,000
\$7,001 - \$7,500	\$25,000
\$7,501 - \$8,000	\$20,000
\$8,001 - \$8,500	\$10,000
\$8,501 - \$9,000	\$5,000
>\$9,000	NA

Buying a resale flat

Buying a 2- to 4-room resale flat:

- SC/ SC: \$80,000
- SC/ SPR: \$70,000

Buying a 5-room or bigger resale flat:

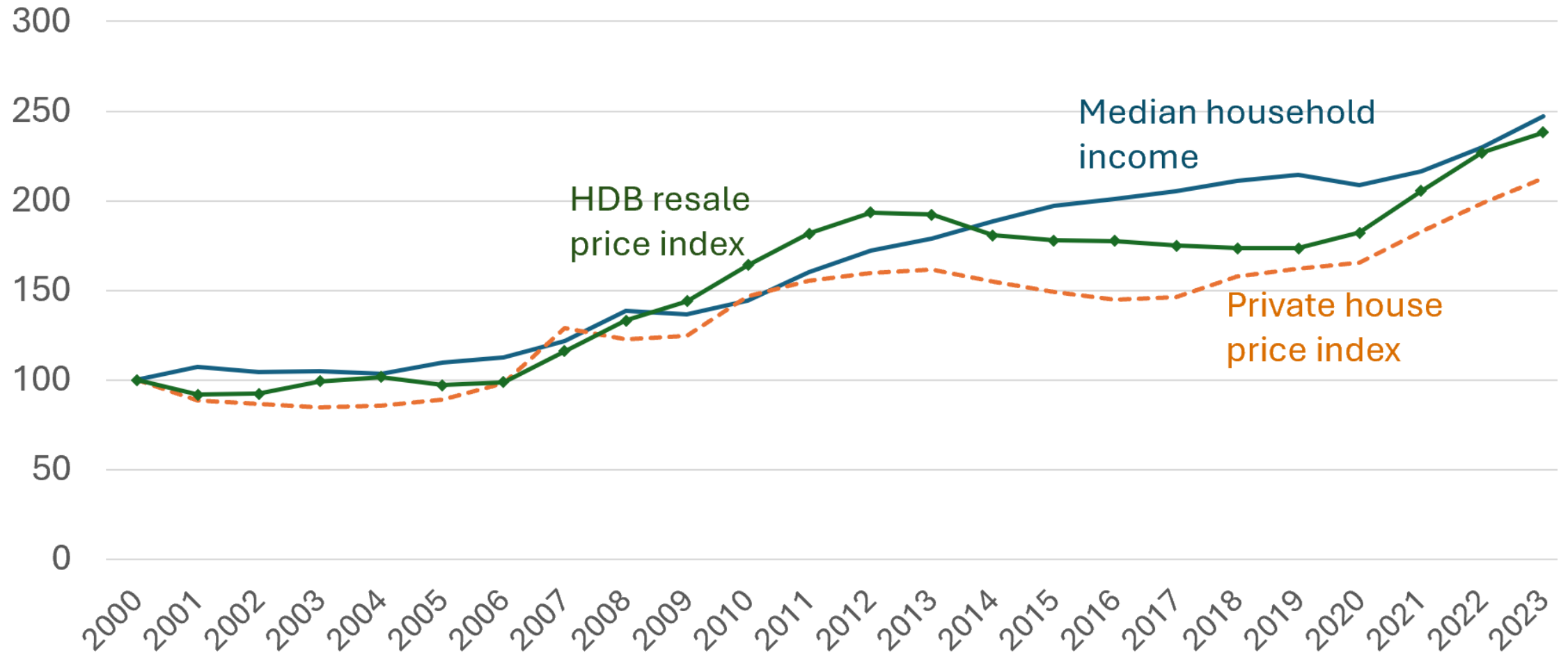
- SC/ SC: \$50,000
- SC/ SPR: \$40,000

Proximity Housing Grant

- \$30,000 to live with your parents/ child
- \$20,000 to live near your parents/ child (within 4km)

Housing

Keeping house prices in line with incomes



Property market “cooling” measures

Round	Date	Policy instrument			
		Changes to LTV ratio and TDSR caps, mortgage loan conditions	Increase in Buyer Stamp Duty (BSD) and ABSD	Changes to Seller Stamp Duty (SSD)	Other regulations
1	14 Sep 2009	√			
2	20 Feb 2010	√		√	
3	30 Aug 2010	√		√	
4	14 Jan 2011	√		√	
5	8 Dec 2011		√		
6	6 Oct 2012	√			
7	12 Jan 2013	√	√		√
8	29 Jun 2013	√			
9	27 Aug 2013	√			√
10	9 Dec 2013	√			√
11	11 Mar 2017	*	√	*	
12	06 Jul 2018	√	√		
13	16 Dec 2021	√	√		
14	30 Sep 2022	√			√
15	15 Feb 2023		√		
16	27 Apr 2023		√		

Note: * denotes relaxation of measures. From 11 March 2017, seller stamp duty was reduced and TDSR cap ceased to apply to mortgage equity withdrawal loans with LTV ratio equal or below 50%.

Source: For details of policy changes, see SRX Property Portal at <https://www.srx.com.sg/cooling-measures>

Types of **Land** Value Capture instruments

Tax and Fee-Based	Development-Based
<ul style="list-style-type: none"> • Land and property tax • Special assessments • Tax Increment Financing 	<ul style="list-style-type: none"> • Land sale or leasing • Joint development or PPPs • Betterment/Development rights charges • Air rights sale • Land readjustment • Urban redevelopment schemes
<ul style="list-style-type: none"> • Important to finance citywide local infra such as streets and roads, water and sewer systems, other public services • Common and widely practiced in US • Amount collected is normally insufficient to cover costs of major infra development 	<ul style="list-style-type: none"> • Useful for major strategic projects such as metro systems • Widely used in East Asia: Japan, Hong Kong, Singapore, cities in China • Land revenues collected are substantial and primary source of infrastructure finance

Source: Suzuki et al. 2015. Financing Transit-Oriented Development with Land Values, p. 54-63

Government Land Leasehold Sales

Government

- Release state lands sales program every 6 months
 - Confirmed list
 - Reserve list
- Regulate land development:
 - Detailed planning
 - Zoning regulations
 - Detailed sales conditions



Private Developer

- Purchase state land through **bidding**
 - Commercial
 - **Residential**
 - Industrial
- Design and build developments while abiding by planning rules, regulations, and sales conditions

Open auction
(for smaller
properties)



Price only tender



Two Envelope Tender
(concept and price)



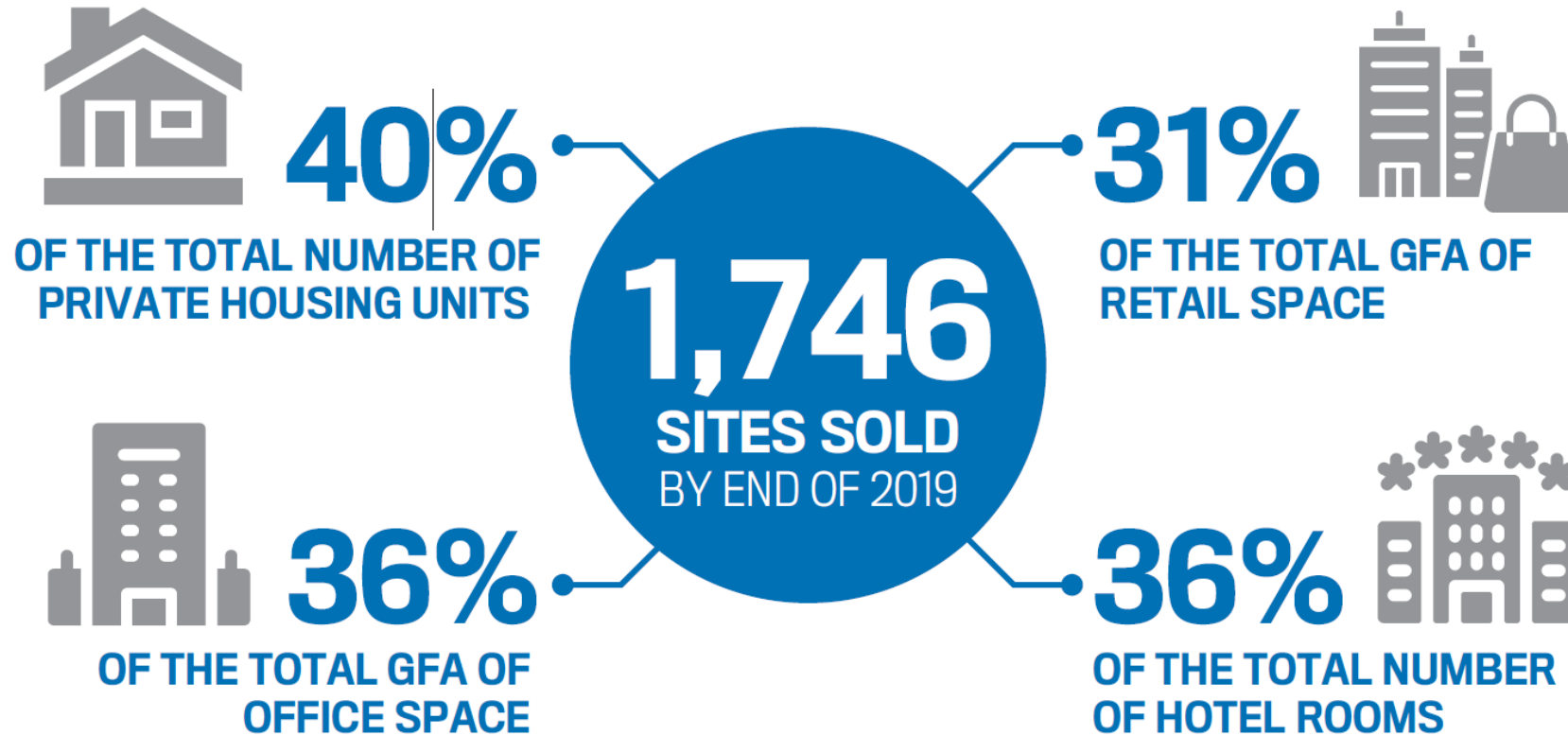
White site – flexibility in
determining mixed uses

Master Developer – Large Scale Dev

Fixed price S\$1.2 billion – Best
proposal

Source for figures: Centre for Liveable Cities (2021). The Government Land Sales Programme.

PROPORTION OF DEVELOPMENTS FROM GLS.



About 14,000 ha or about 20% of land in Singapore

Marina Bay

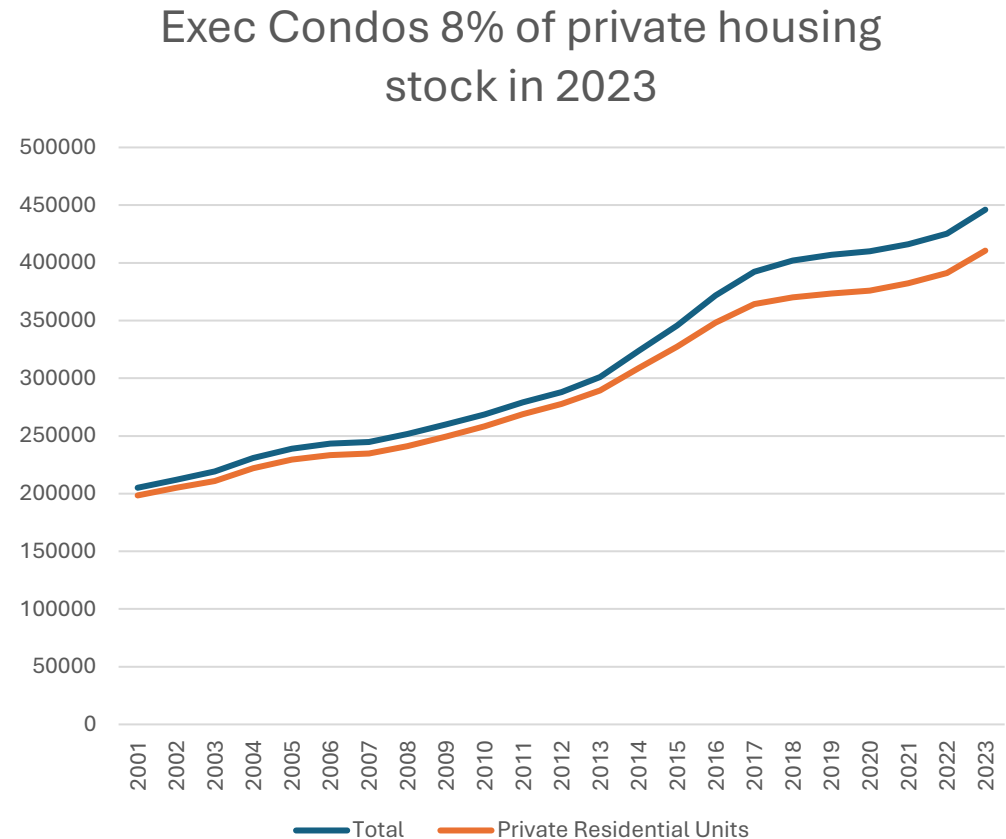


1960s: CBD, General Post Office, sea, Singapore River and Anderson Bridge

Gardens by the Bay, Marina Bay Sands, Marina Bay Reservoir, MBFC, Fullerton Hotel, Singapore River, Anderson Bridge

1996 Executive Condominium Scheme (~ PPP)

- Government land sales to private developer
- Household monthly income ceiling ~S\$16,000
- Minimum Occupation Period – 5 years
- 5th – 10th year: Buyer must be Singaporean or PR
- After 10th year, **considered private properties**



A cocktail of “takings” and “givings”

A. Housing Supply Interventions

1. **Government land acquisition/reclamation**
2. **Land use planning**
3. **HDB (71%)**
 - provides rental housing (4%)
 - develops units for sale (67%)
 - regulates secondary market (resale HDB flats)
4. **Executive Condominium PPP Scheme (2%)**
5. **Private housing (27%)**
 - rent decontrol
 - land use Master Plan: up-zoning guidance
 - legislation to remove gridlock and incentivise redevelopment at higher density
 - transparent land **betterment tax** framework
 - government **land sales** for private housing

B. Housing Demand Interventions

1. **CPF savings for housing purchase**
2. **Market segmentation & regulation**
 - residency status (citizen, PR, foreigner)
 - household income
 - household profile (ethnicity, age, marital status)
 - location (prime, mature, non-mature estates)
3. **Macroprudential (anti-speculation) policies**
 - buyer stamp duty (1% - 6%)
 - additional **buyer stamp duty** (0% - 65%)
 - individual or entity
 - residency status
 - number of housing units owned by buyer
 - **seller stamp duty** (0% - 12%)
 - caps on LTV and DS ratios
4. **Progressive property taxes (0% -36%)**

Housing subsidies

Average discount
from market prices
~ S\$300,000 per
eligible household

	FY2023	FY2022
Government grants to HDB	S\$ 5.4 b	S\$ 4.4 b
Government grants to HDB as % of GDP	0.80%	0.64%
HDB payment to Singapore Land Authority (SLA) for purchase of land	S\$ 5.4 b	S\$ 4.5 b
Land receipts to SLA from HDB minus government grants to HDB	S\$0.001 b	S\$0.059 b

MRT Infrastructure

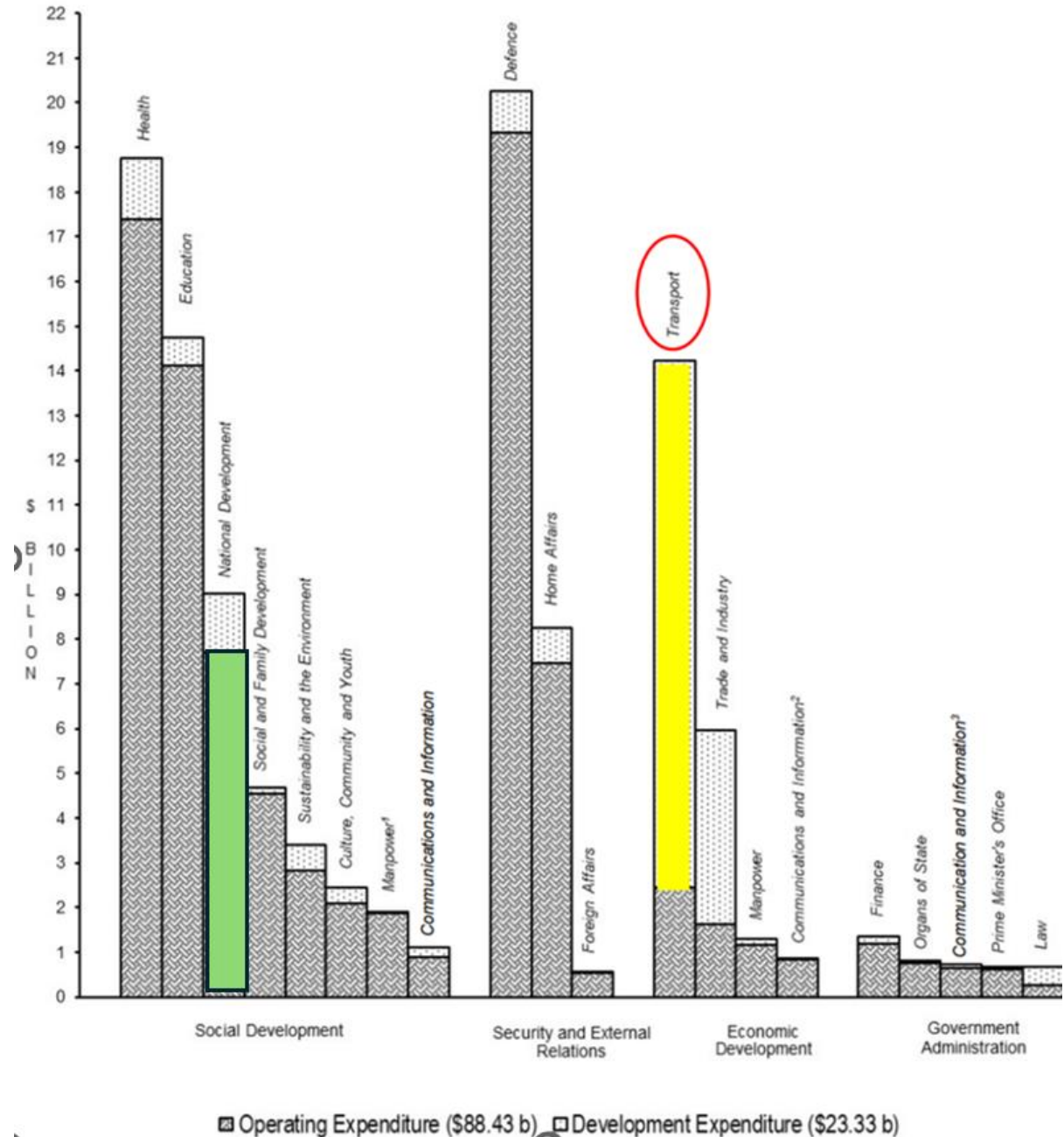


Source for image: Land Transport Authority

Government Expenditure for FY2024 by Sector and Ministry

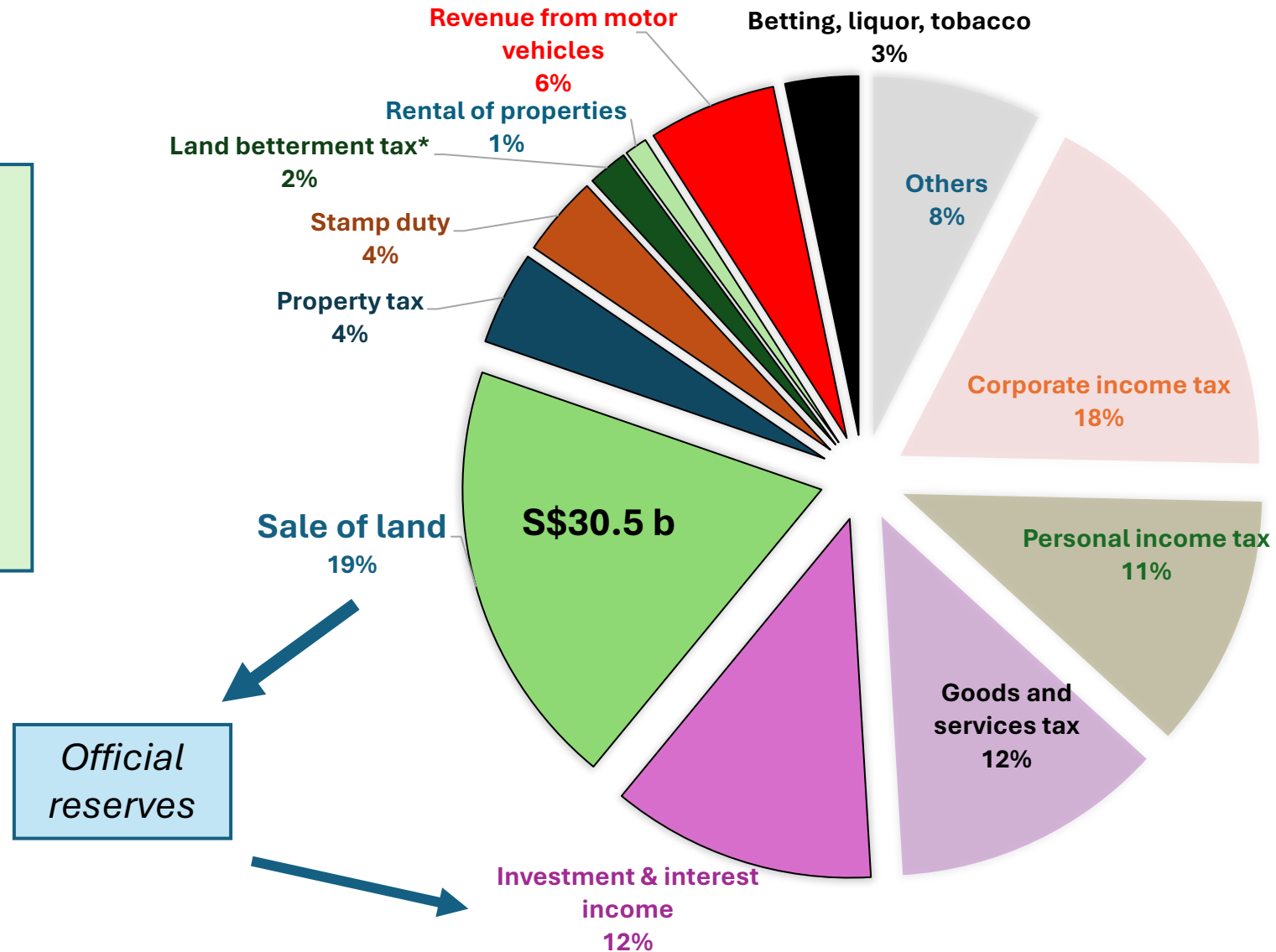
Transport Ministry allocated largest Development Expenditure amount

Source for chart: Ministry of Finance



Government revenue, est. FY2024

Revenues associated with “land value capture” & externalities: ~ 50% of total revenues, ~10% of GDP



Singapore – case of how
strategic value capture and planning,
government supply of housing,
integrating housing with retirement savings,
careful regulation of housing markets
have led to affordable housing,
enabling economic growth with equity