

# Measuring households' experience of price change: the Household Costs Indices (HCIs)

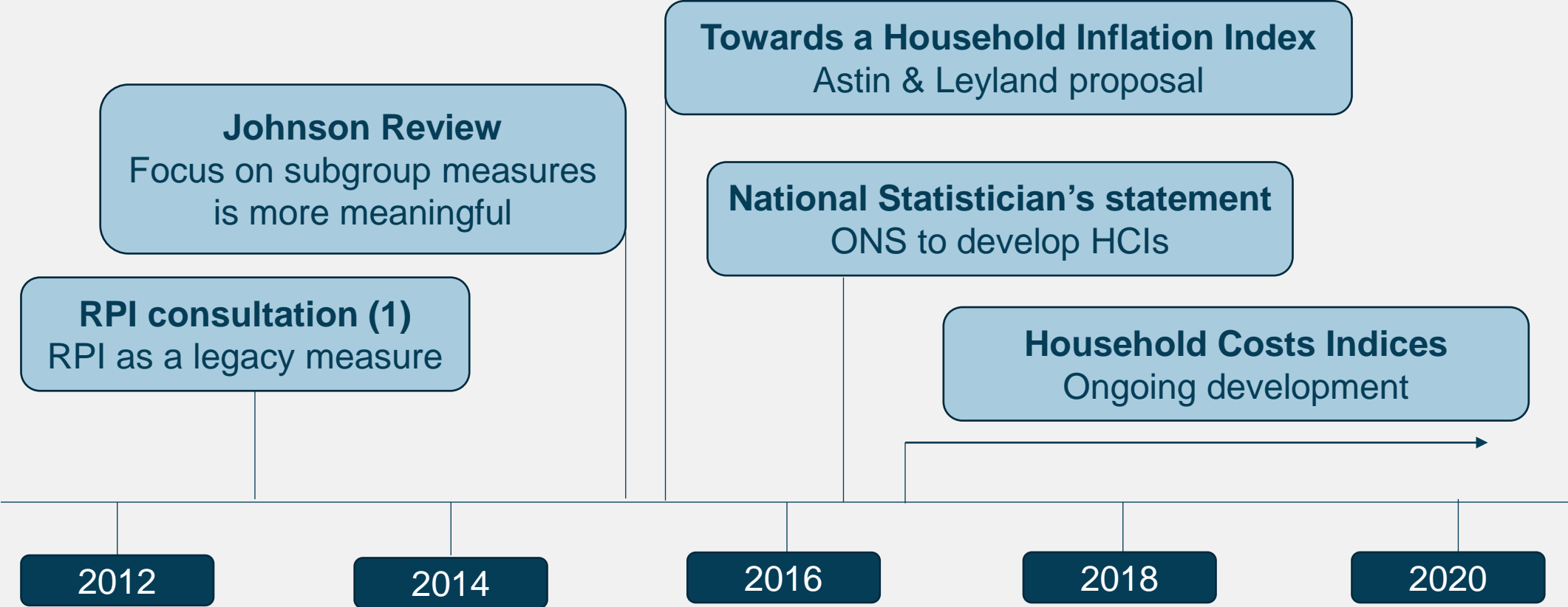
**Christopher Payne**

Consumer Prices Development  
Prices Division

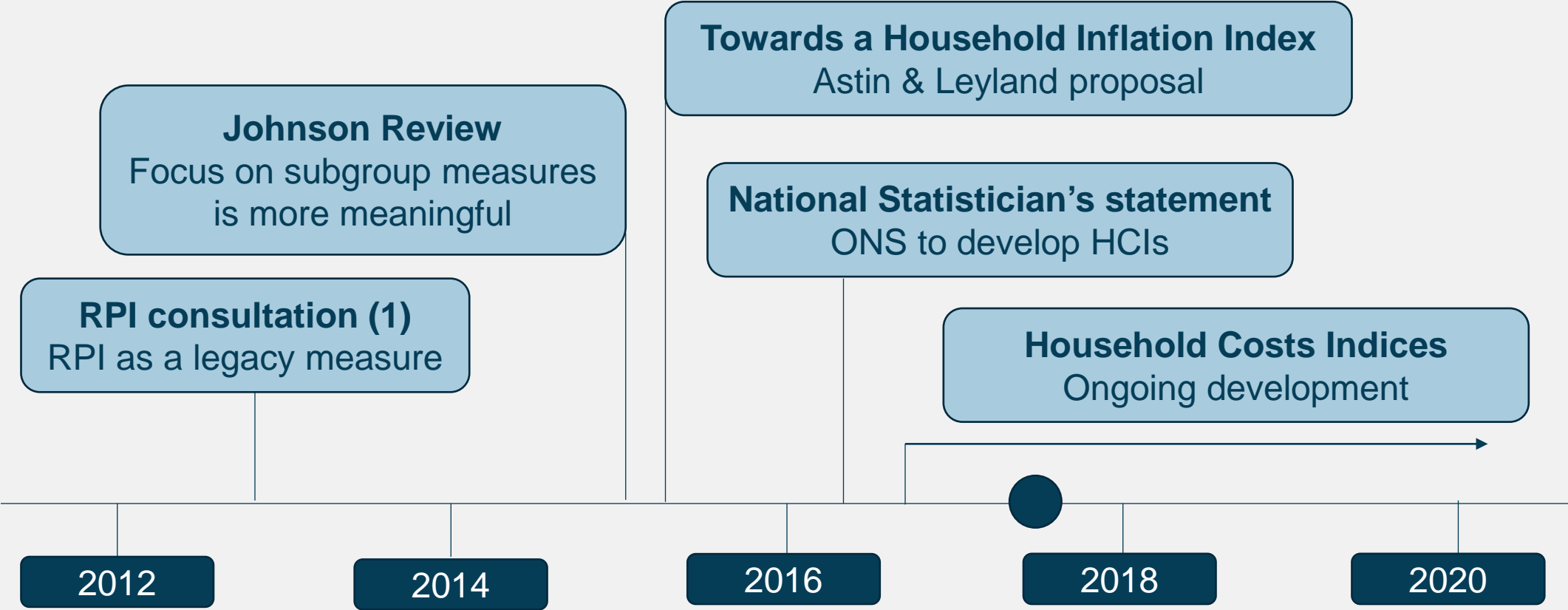
---

14 May 2021

# Timeline of the HCIs development



# Timeline of the HCIs development



# The National Statistician defines three “use cases” for consumer price statistics

## The three “Use cases” define a requirement for:

**A measure consistent with economic concepts and approaches**

**Looking at price changes as experienced by households**

**Long-standing, existing contracts that need the RPI**

# The three “Use cases” define a requirement for:

**CPIH:** Economic principles; most comprehensive measure; range of subgroups

**CPI:** Internationally comparable measure; omits owner occupiers’ housing costs

**Looking at price changes as experienced by households**

**Long-standing, existing contracts that need the RPI**

# The three “Use cases” define a requirement for:

**CPIH:** Economic principles; most comprehensive measure; range of subgroups

**CPI:** Internationally comparable measure; omits owner occupiers’ housing costs

**The Household Costs Indices:** Households’ experience of inflation; focus on subgroup measures; compare against matched income measure

**Long-standing, existing contracts that need the RPI**

# The three “Use cases” define a requirement for:

**CPIH:** Economic principles; most comprehensive measure; range of subgroups

**CPI:** Internationally comparable measure; omits owner occupiers’ housing costs

**The Household Costs Indices:** Households’ experience of inflation; focus on subgroup measures; compare against matched income measure

**RPI:** Legacy measure; range of measures reduced



# What are the Household Costs Indices?

# The HCIs: definition

	CPIH	HCIs
<i>Weighting structure</i>	Plutocratic	Democratic
<i>Coverage</i>	Domestic	National (future work)
<i>Timing of price changes</i>	Acquisition (with some use)	Payments (and acquisition)
<i>Owner occupied housing</i>	Rental equivalence	Payments
<i>Interest</i>	Excluded	Included
<i>Insurance weight</i>	Net of claims pool	Gross of claims pool
<i>Capital costs</i>	Excluded	Excluded

# International comparisons

## Stats New Zealand:

- Household Living Costs Price Indexes
  - Democratic weights, OOH on a payments basis, gross insurance, other interest on debt

## Australian Bureau of Statistics:

- Selected Living Costs Indexes
  - OOH on a payments basis, gross insurance and consumer credit charges

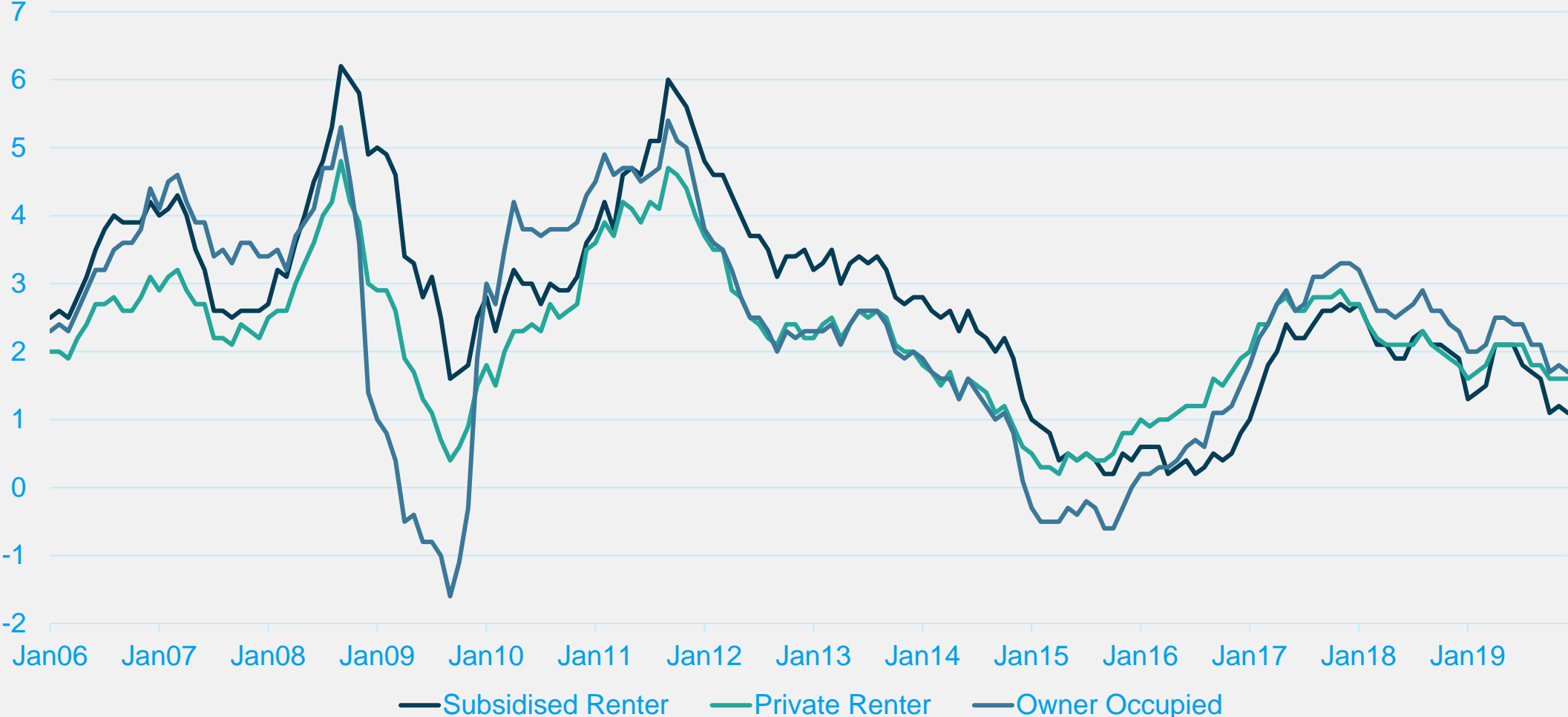
# The subgroups



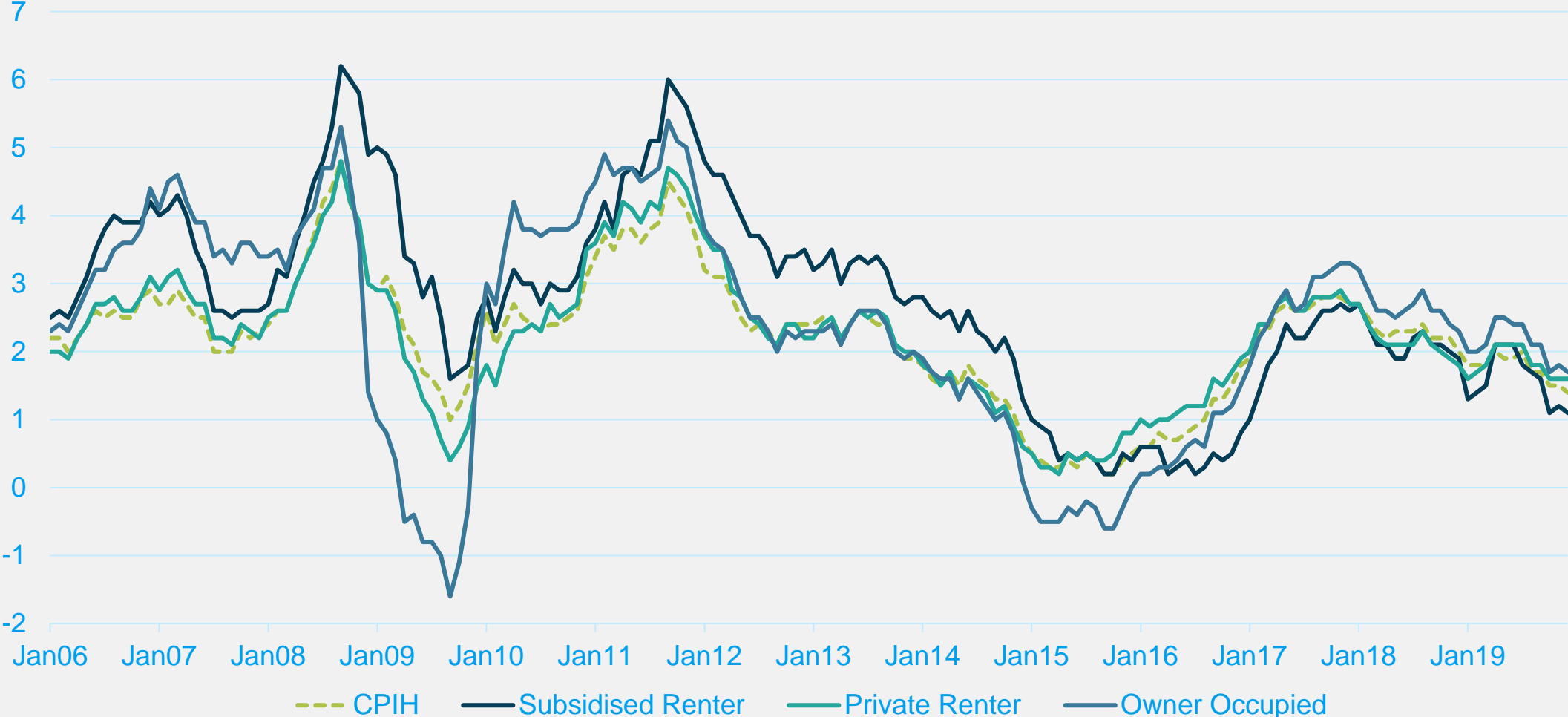
# HICIs, low and high income deciles (12-m % growth)



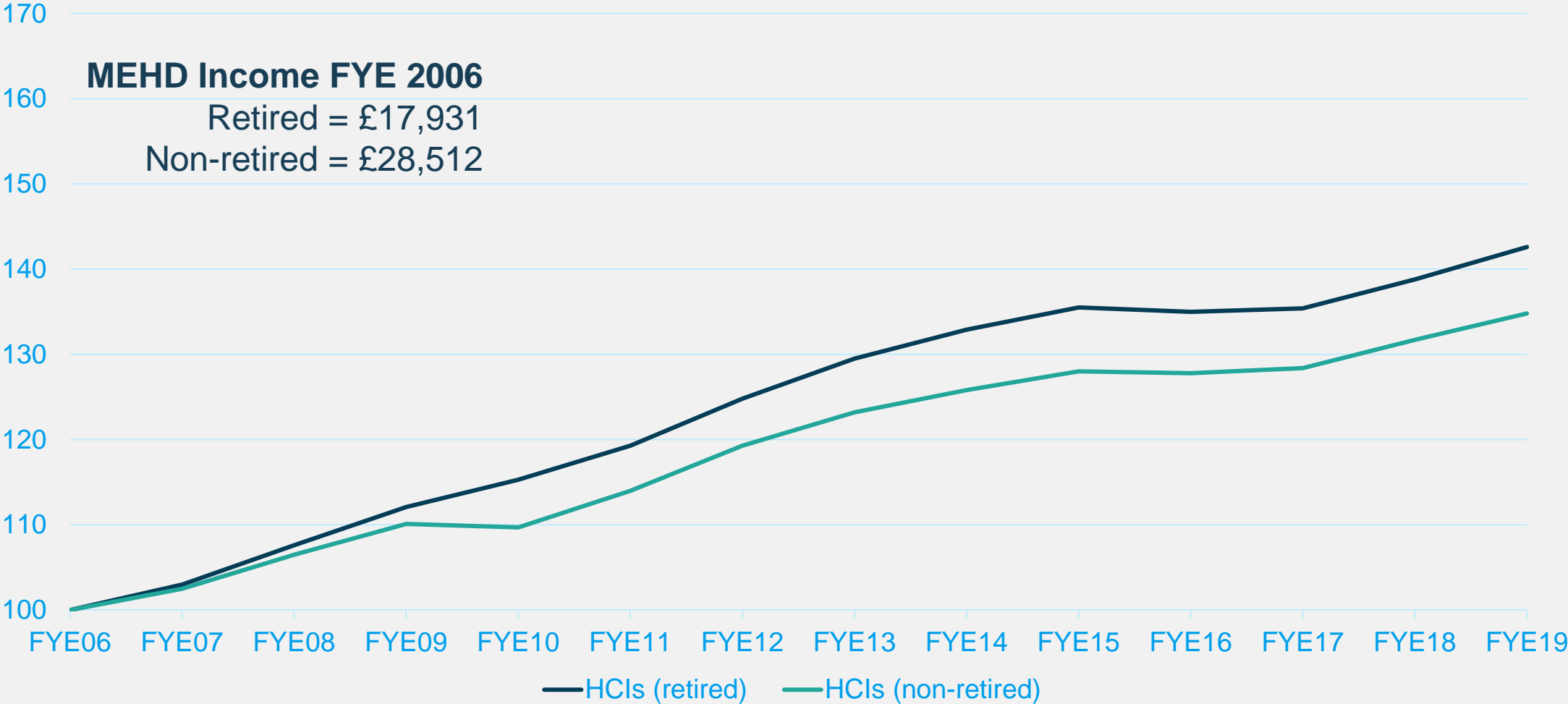
# HICIs by tenure type (12-m % growth)



# HICIs by tenure type (12-m % growth)

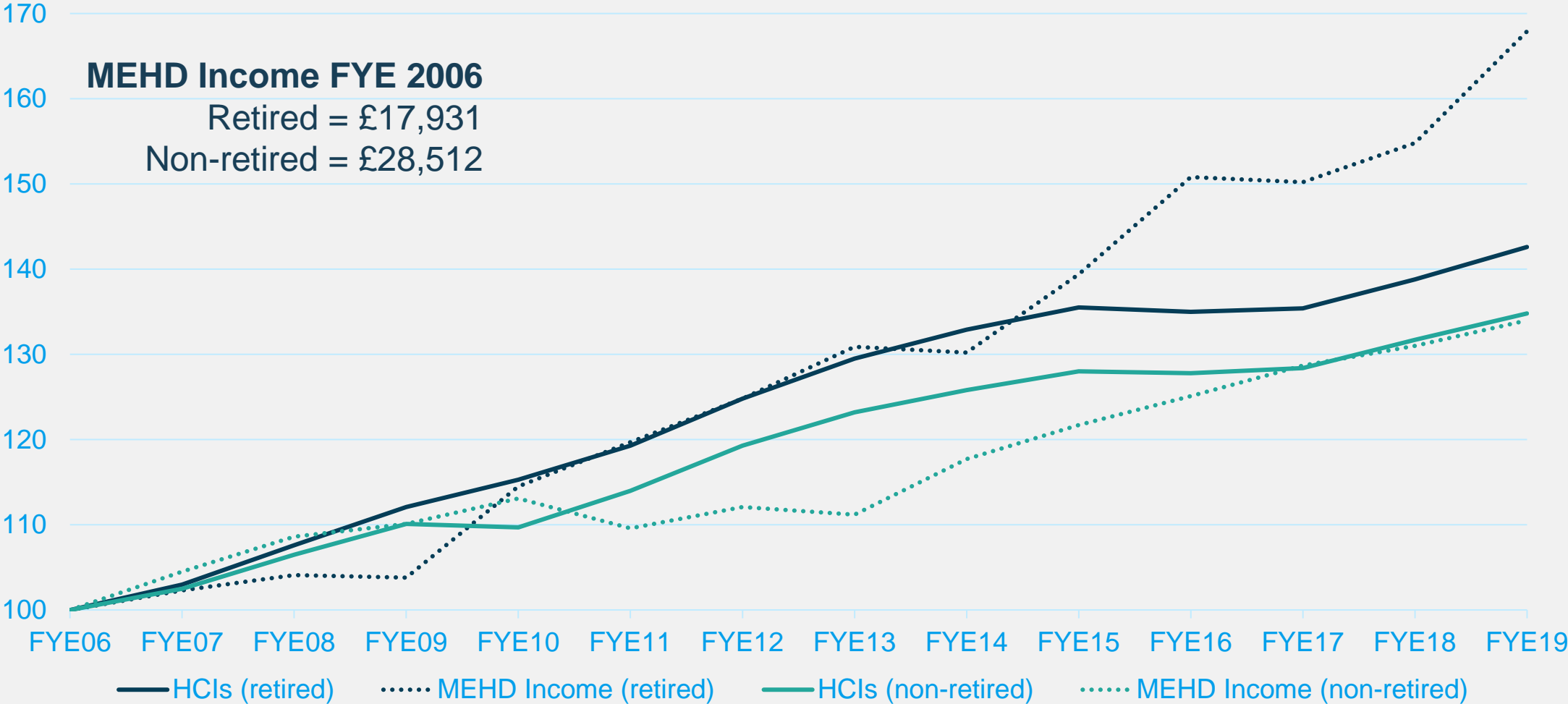


# HCI by retirement status (index, FYE 2006=100)





# HCI by retirement status (index, FYE 2006=100)



# Conceptual challenges and users needs

# Prices or costs?

# Interest paid vs interest accrued

# Interest paid vs interest accrued

Match to income measure? (...tail wagging the dog)

# Interest paid vs interest accrued

Compare with unmatched income measure?

# Implications of measuring payments

# Implications of measuring on a payments basis

## Consumers can:

- Pay now for current consumption
  - Payments = use (and probably = acquisition)
- Pay later for current consumption (or pay now for earlier consumption)
  - Finance: student loans, new and used cars, white goods, etc.
- Pay now for future consumption
  - Mortgage capital, pension contributions (mandatory vs voluntary, savings)



# Implications of measuring on a payments basis

## Consumers can:

- Pay now for current consumption
  - Payments = use (and probably = acquisition)
- Pay later for current consumption (or pay now for earlier consumption)
  - Finance: student loans, new and used cars, white goods, etc.
- Pay now for future consumption
  - Mortgage capital, pension contributions (mandatory vs voluntary, savings)

# Implications of measuring on a payments basis

## Consumers can:

- Pay now for current consumption
  - Payments = use (and probably = acquisition)
- Pay later for current consumption (or pay now for earlier consumption)
  - Finance: student loans, new and used cars, white goods, etc.
- Pay now for future consumption
  - Mortgage capital, pension contributions (mandatory vs voluntary, savings)

# Implications of measuring on a payments basis

## Consumers can:

- Pay now for current consumption
  - Payments = use (and probably = acquisition)
- Pay later for current consumption (or pay now for earlier consumption)
  - Finance: student loans, new and used cars, white goods, etc.
- Pay now for future consumption
  - Mortgage capital, pension contributions (mandatory vs voluntary), savings

# Managing the trade off...

# ESCOE/ ONS workshop

## The conceptual foundations of the Household Costs Indices

- Discussion topics:
  - *What should the HCIs be measuring?*
  - *Where should we measure payments rather than acquisition prices?*
  - *What other items should be in scope?*
  - *what should be the development priorities going forward?*
- Mix of attendees

# Following up on the workshop

Reviewed in detail with Stakeholder Advisory Panel

National Statistician statement on future of HCIs:

- Aim for quarterly publication
- National Statistic by 2025
- Variant measure for later development: HCIs-Capital
- Further exploration of variants, e.g. mandatory pension contributions

# On Household Costs Indices (Weale, 2020)

Examined the HCIs against a consumption framework:

- Supported the use of democratic weights and gross insurance
- Treatment of interest should be symmetrical
  - Analysis should be carried out to understand the impact of not doing so
- Payments framework should not be extended further
  - Saving for future consumption is harder to measure than delayed payment of current consumption
  - student loan repayments can be considered as a graduate tax

# Questions



# ANNEX A: Constructing the HCIs

# Democratic weights and subgroup assignment

## HOUSEHOLD RECORDS

a) Expenditure (£)  
b) Expenditure (£)

b) Expenditure (£)

a) Expenditure (£)  
b) Expenditure (£)  
c) Expenditure (£)

## CLASS

C1 (£)

C2 (£)

C3 (£)

## GROUP

G1 (£)

G2 (£)

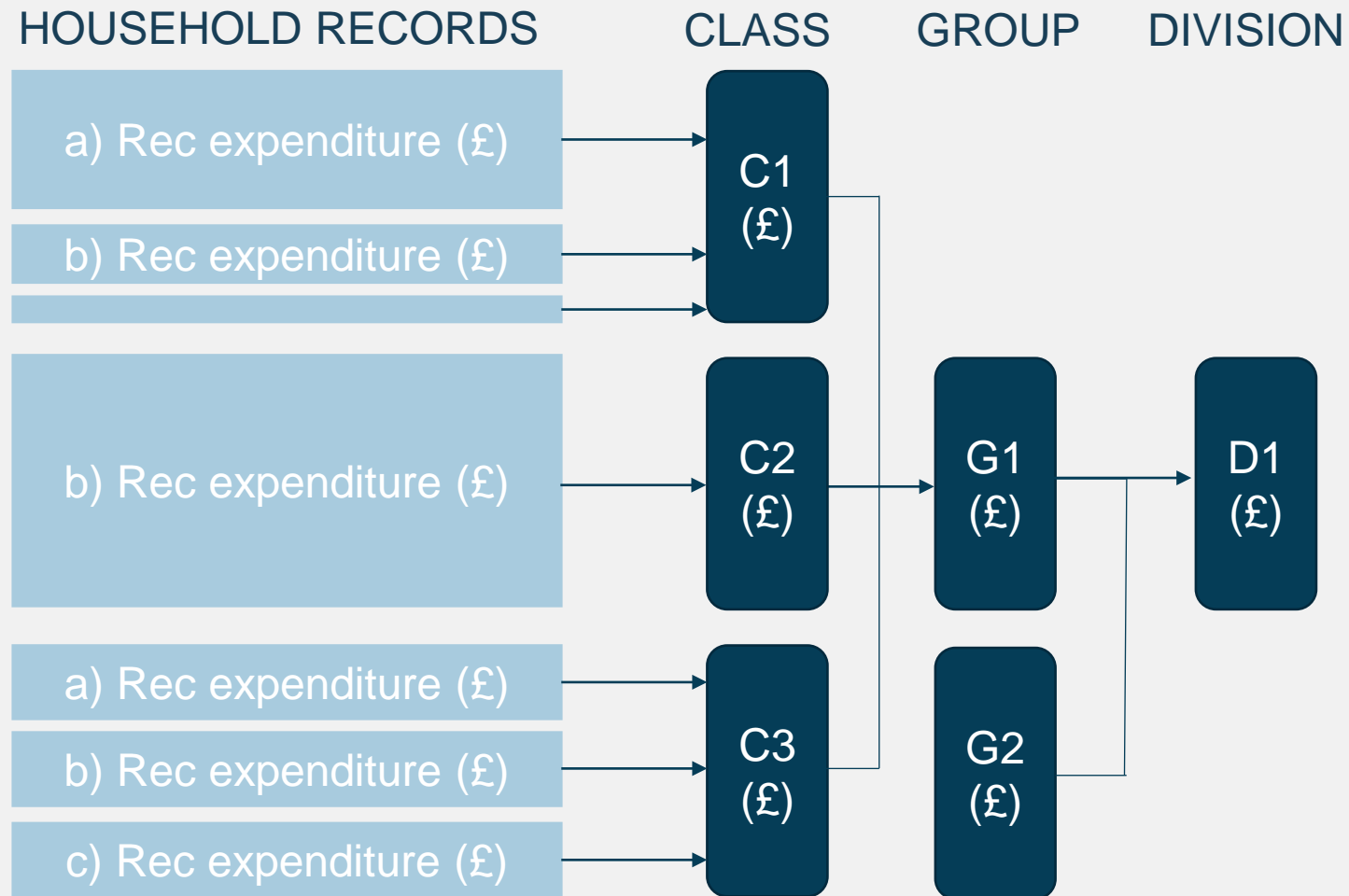
## DIVISION

D1 (£)

1. Household-level survey records do not sum to national accounts class totals



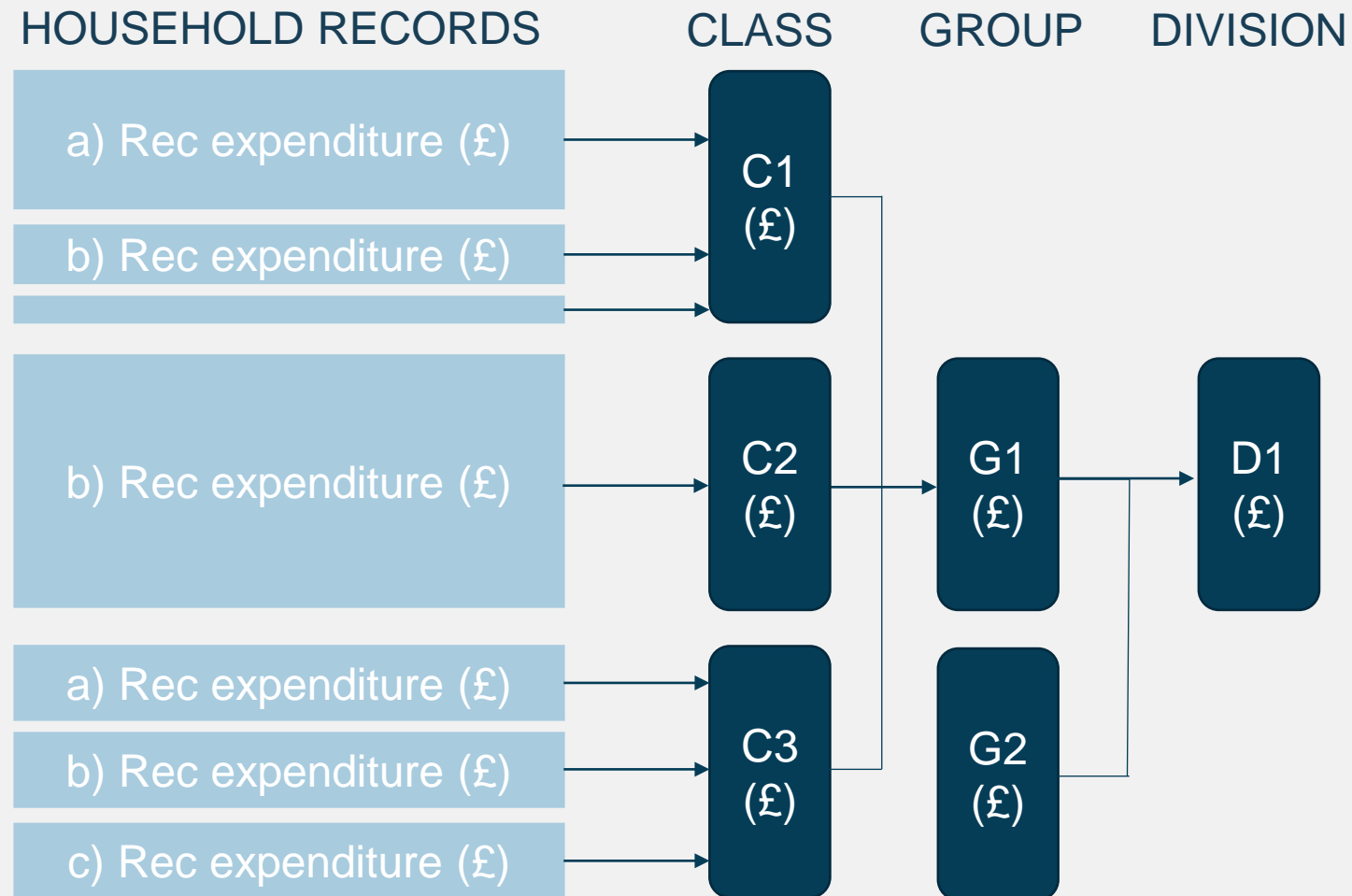
# Democratic weights and subgroup assignment



2. Household-level survey records are scaled proportionally to equal national accounts class totals



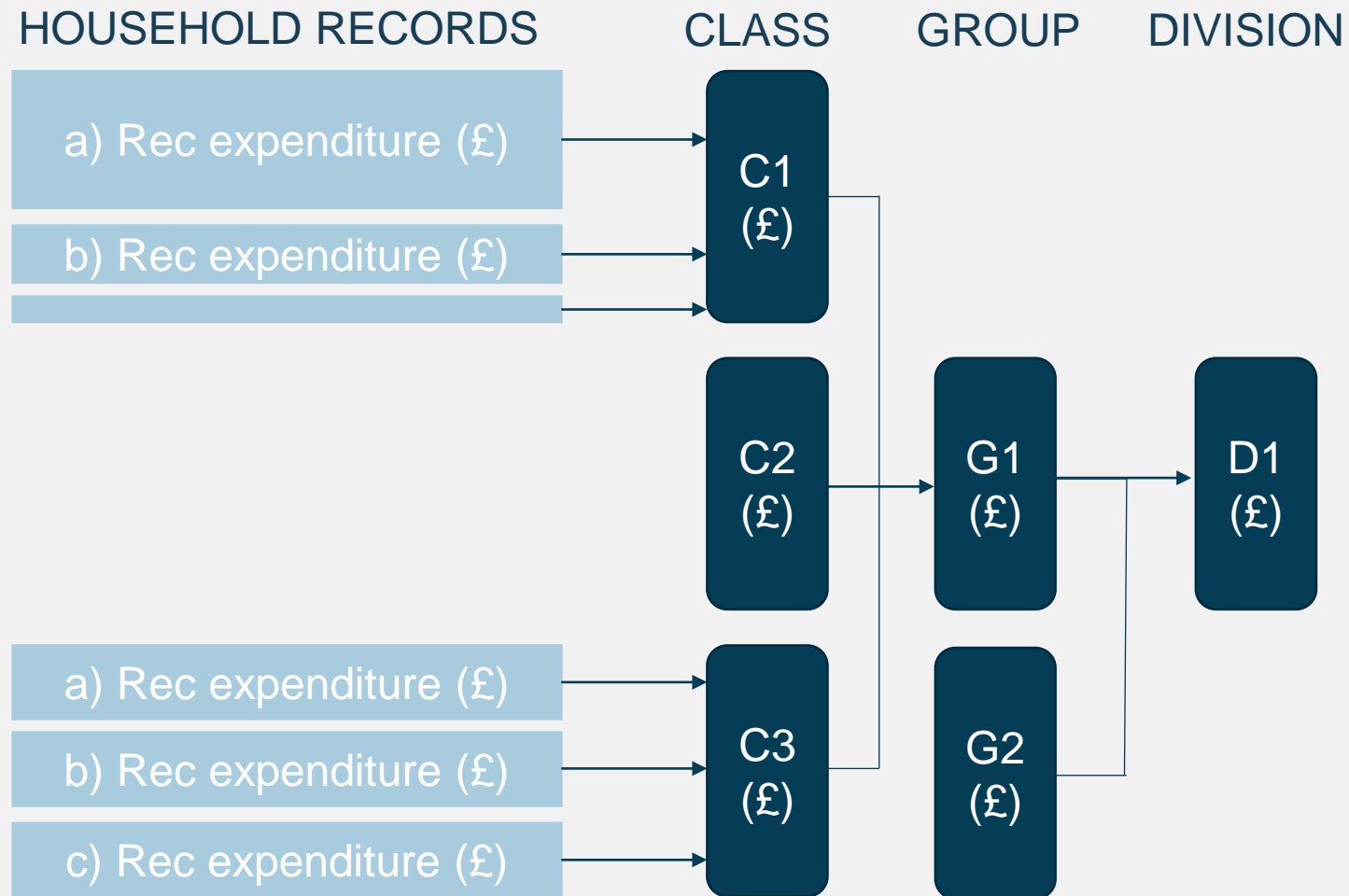
# Democratic weights and subgroup assignment



3. But a low number of households have recorded expenditure from Class C2, and the total is less than half of the national accounts total. This results in a large amount of expenditure being assigned to household b



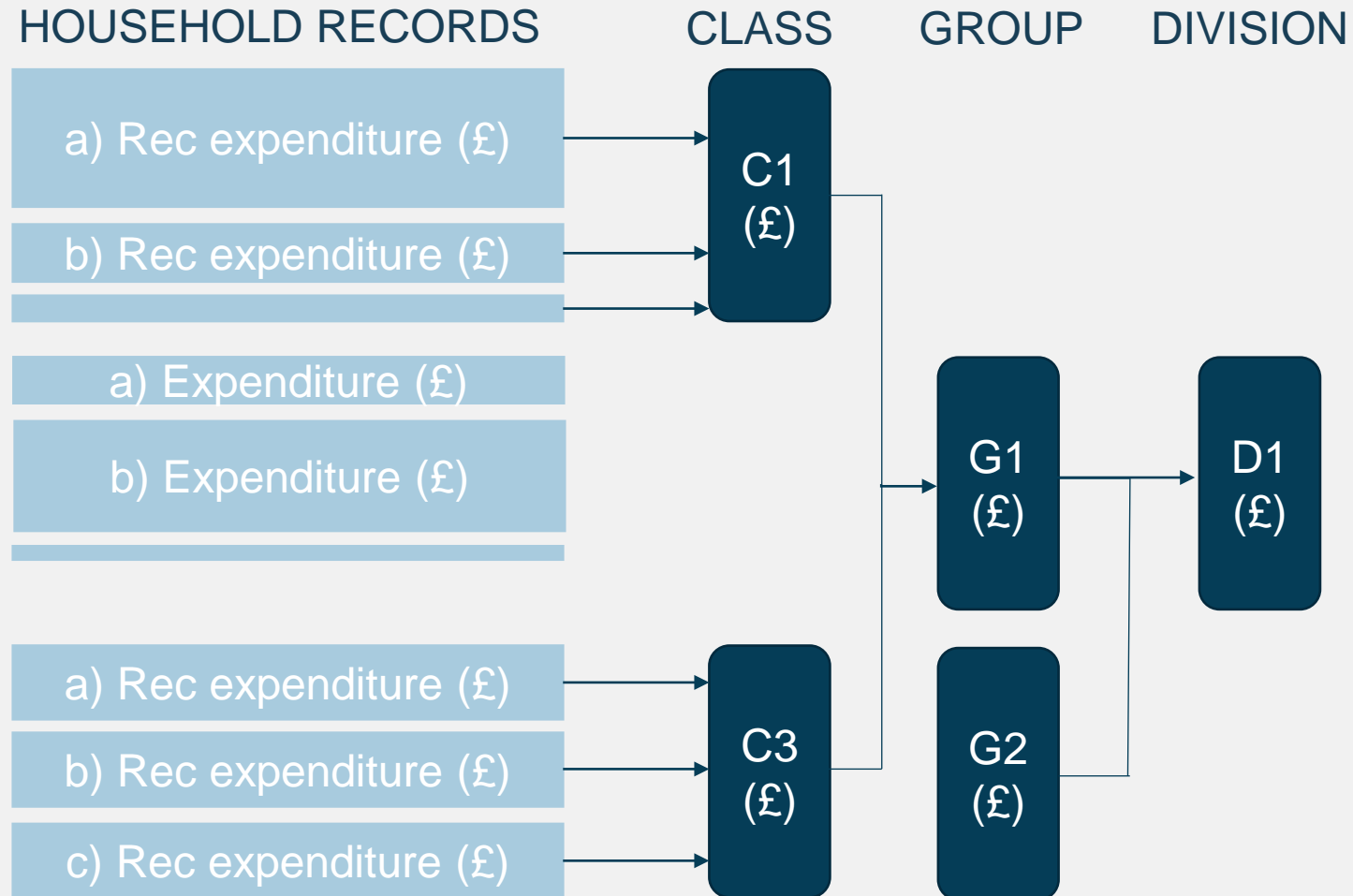
# Democratic weights and subgroup assignment



3. But a low number of households have recorded expenditure from Class C2, and the total is less than half of the national accounts total. This results in a large amount of expenditure being assigned to household b



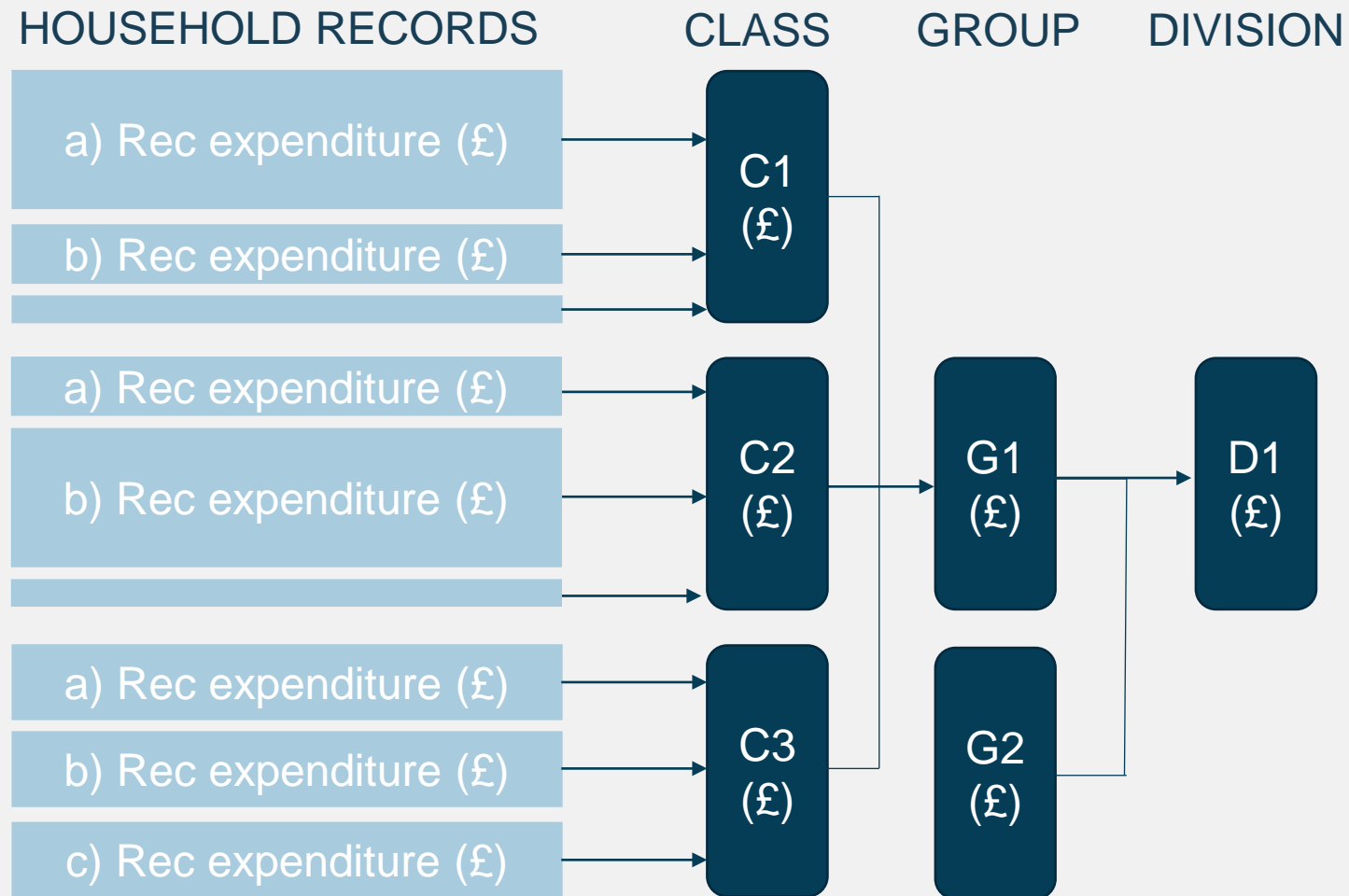
# Democratic weights and subgroup assignment



4. Instead, the proportion of spending at the group level is used for each household



# Democratic weights and subgroup assignment



5. And Class-level spending for C2 is assigned on the basis of Group-level proportions instead



# Data for other elements (HCIs)

Item	Component	Data source
Mortgage interest payments	Price index (debt profile)	RPI (UK HPI, Bank of England, LCF)
	Expenditure weight	RPI (LCF)
Interest (other)	Price index (simple revaluation)	Bank of England
	Expenditure weight	LCF and Wealth and Assets Survey
Student loan repayments	Price index (threshold model)	Labour Force Survey, Gov.uk
	Expenditure weight	SLC published tables
Tuition fees paid upfront	Price index	CPIH (HESA, OFS)
	Expenditure weight	SLC & HESA published tables
Insurance	Expenditure weight	RPI (LCF), population projections



# Limitations

- No household-specific price data:
  - Assume different households face same prices
  - Regional subgroups?
- HHFCE & LCF coverage differences
- Sample sizes
- Pandemic limitations: relevance