

# **EPR program for EEE in Japan: Brand Separation?**

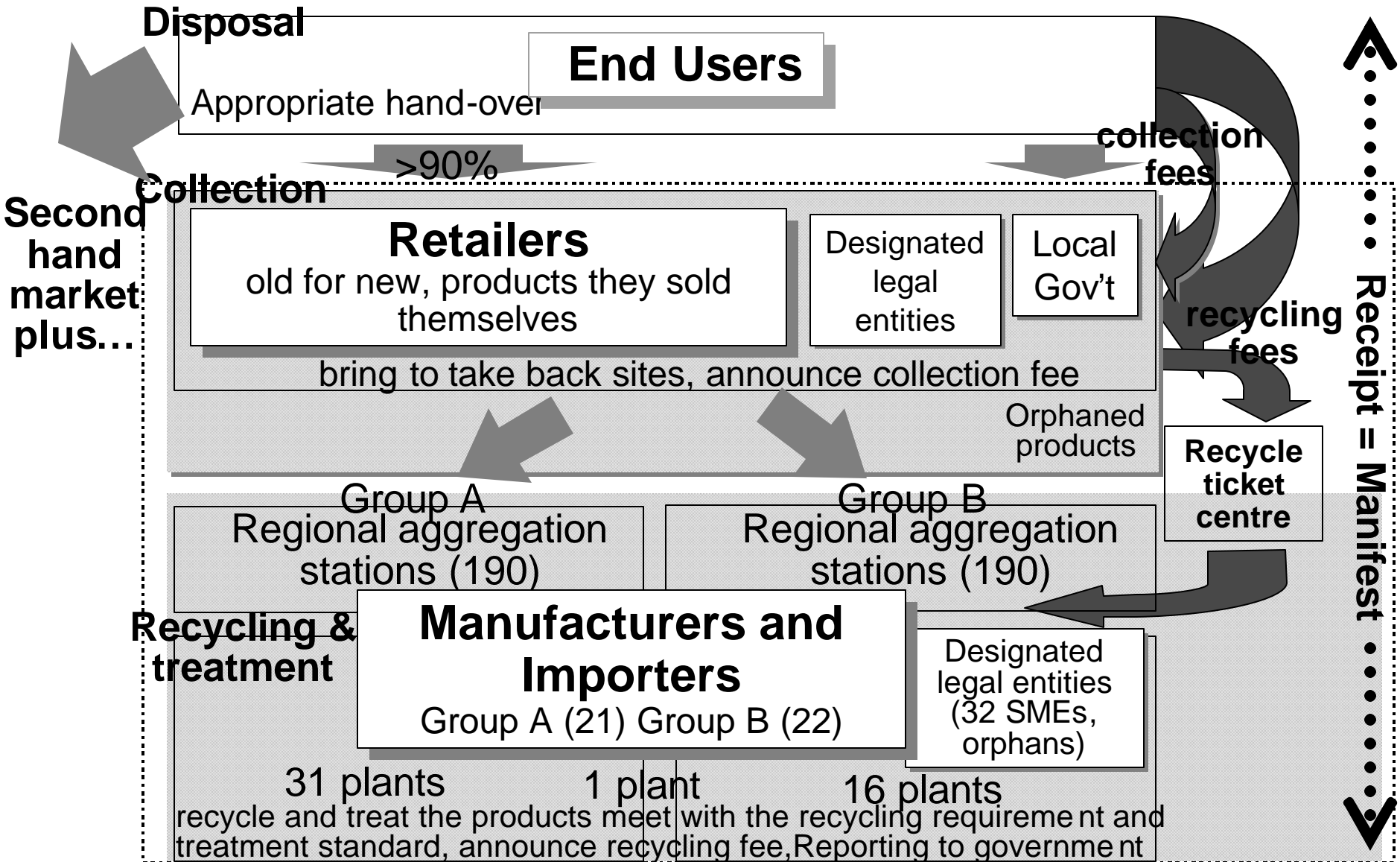
Naoko Tojo, Ph.D  
Assistant Professor, IIIEE

INSEAD WEEE Directive Series  
Producer Responsibility for WEEE: Future Waste and  
Incentives for Design  
Fontainebleau, 30 November 2006

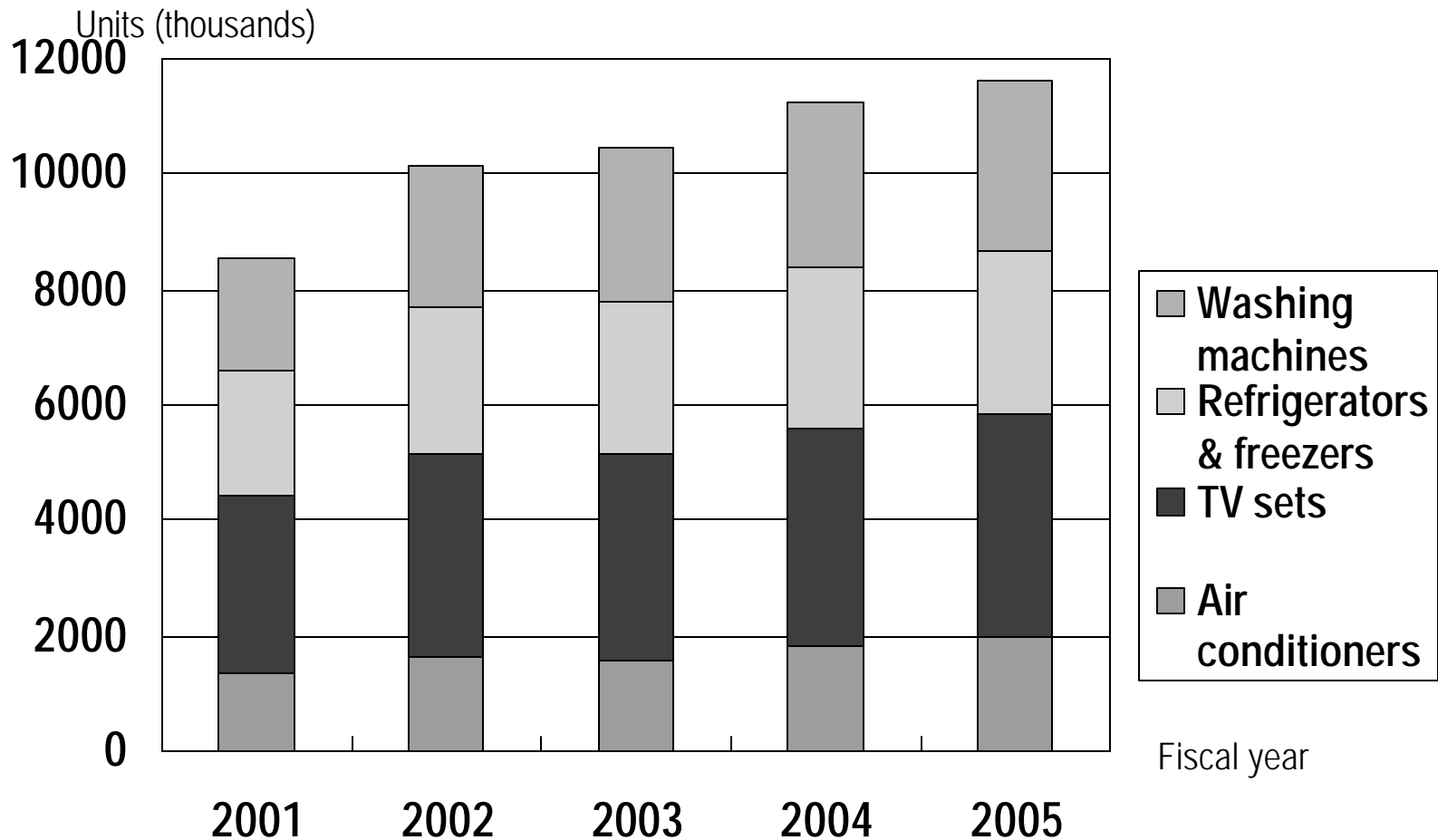
# EPR for EEE in Japan

- Came into force in April 2001
  - Treatment standards of hazardous substances via revised waste management law
- Scope in the first phase: **four large home appliances**: TV sets, refrigerators & freezers, washing machines, air conditioners
  - PC under a different regulation (from business: April 2001, from households: October 2003)
- Revision under discussion

# Specified Home Appliance Recycling Law, Japan



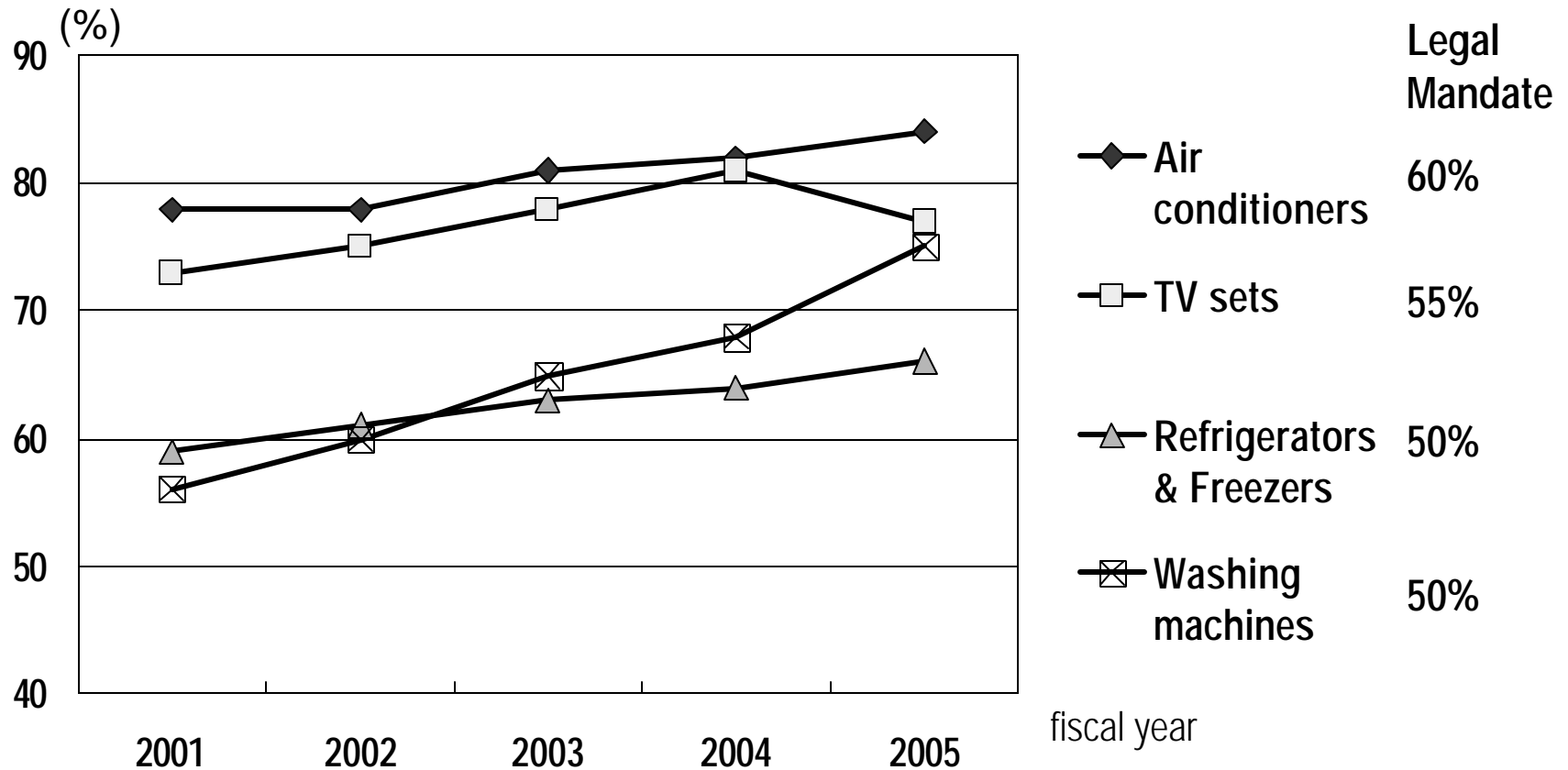
# Achievement: collection



Source: based on AEHA (2006)

However, the estimated annual E-o-I appliances is ca 22 million.

# Achievement: recycling



Source: based on AEHA (2006)

- Recycling includes component reuse & material recycling
- Exclusion of recycled materials with negative value

# Measures for closing the loop

- Upstream changes
  - Use of DfE assessment tools including end-of-life phase
  - Marking of materials and locations for ease of dismantlement
  - Unification of materials (plastics, magnetic alloys)
  - Reduction of the number of components and screws
  - Standardisation of screws
  - Use of recycled plastics in new components (not down-cycling)
- Development of recycling technologies
  - Separation of various types of plastics
  - Tools for ease of manual dismantling
- Communication between recyclers and designers

# Individual responsibility?

## Individual financial responsibility

- Producers pay for the end-of-life management of their own products

## Individual physical responsibility

- Distinction of brands and properties of products
- Producers control over the fate of their products

# Individual element 1: physical responsibility

Manufacturers' strategy regarding recycling

Group A: seeks to utilise existing recyclers

Group B: seeks to establish new plants on their own

However, each prominent manufacturer in both groups runs at least one recycling plant

(Prominent PC manufacturers have their own network)

→ Contribution to DfE

Distinction of brands from collection to recycling

→ Possibility for cost differentiation between brands?

# Individual element 2: financial responsibility

Each manufacturer must announce recycling fees independently

However...

- Prominent manufacturers announced the same fees
  - though lower than estimated actual costs
  - PC manufacturers announced different fees for historic WEEE from households
- No differentiation between brands/models among manufacturers in the same group
  - Difference depending on when products were manufactured, but not so much between brands

# Collection & recycling fee

Collection  
0.8 –48  
(in Euro)

+

Recycling (in Euro)	
Refrigerators/freezers	24.3-31.2
Washing machines	18.8-25.1
TV sets	32-38.9
Air conditioners	16.7-22.8

- End users pay
  - Cost internalisation for new PC from households
- Breakdown of costs not available
  - required during the discussion on revision

# Reflections

- Various efforts on DfE and recycling technologies
- Distinction between brands and models
  - Potential for cost differentiation
- However, no cost differentiation between brands and models so far
  - Too much administrative cost?
  - Similar advancement among producers?
  - Reputation more important than cost?
  - But historical products... maybe for new products?
- Involvement of producers in recycling activities provides learning opportunities
- PCs from households: learning from experiences?

# Discussion points for revisions

- Invisible flow
- Illegal dumping
- Design for Environment
- Recycling, but reduce and reuse?
- Financial mechanisms
- Scope
- Calculation of recycling rates
- Different collection points for two groups
- Remote islands
- Existing actors
- Awareness raising

# Thank you!

# Questions?

Contact information:  
[Naoko.Tojo@iiiee.lu.se](mailto:Naoko.Tojo@iiiee.lu.se)  
[www.iiiee.lu.se](http://www.iiiee.lu.se)