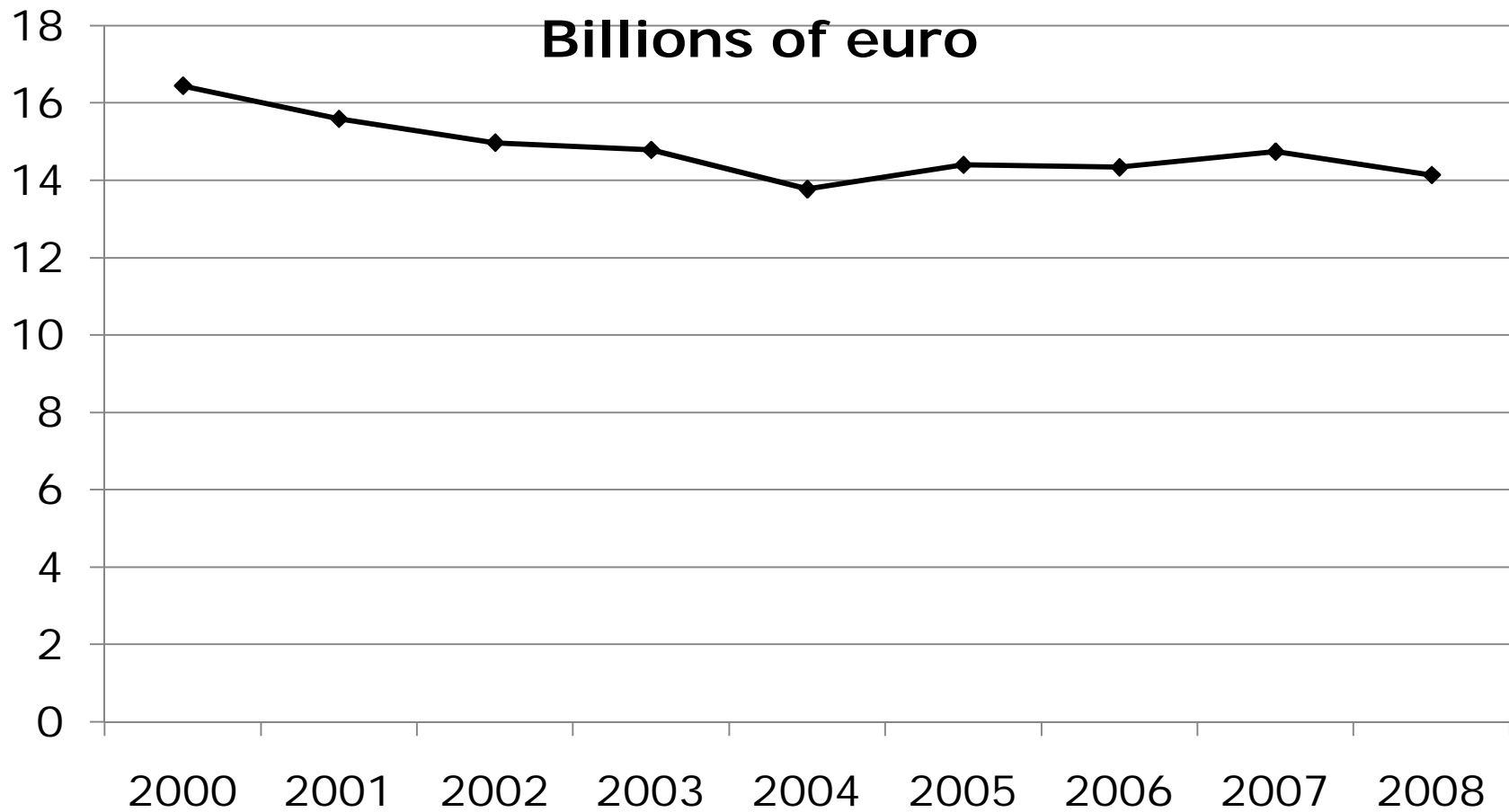


Social Costs of Road Accidents in Belgium

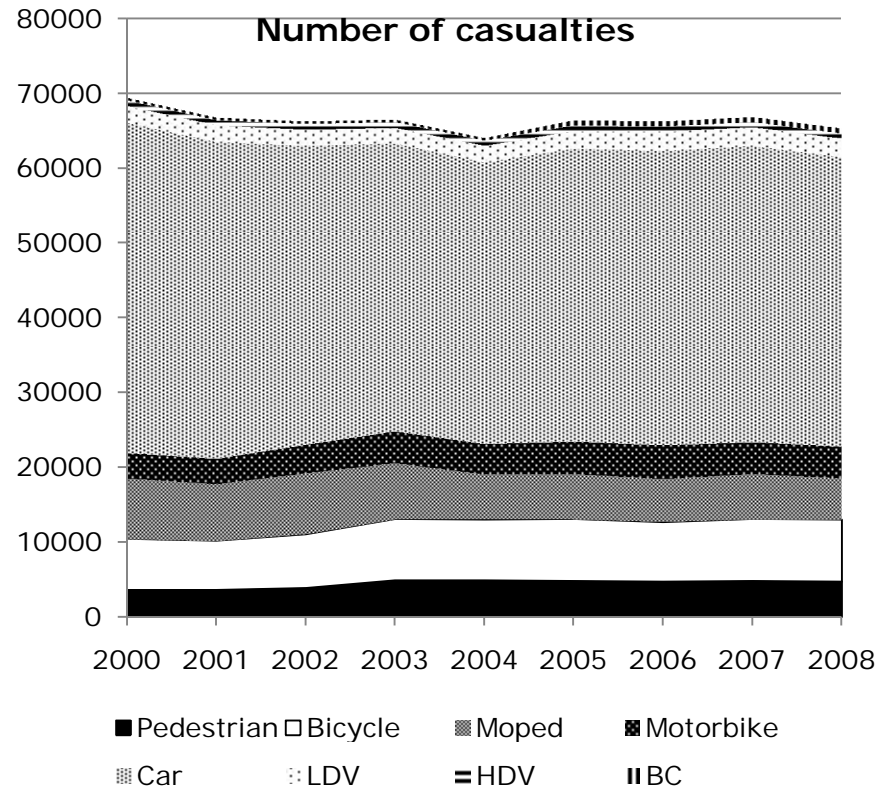
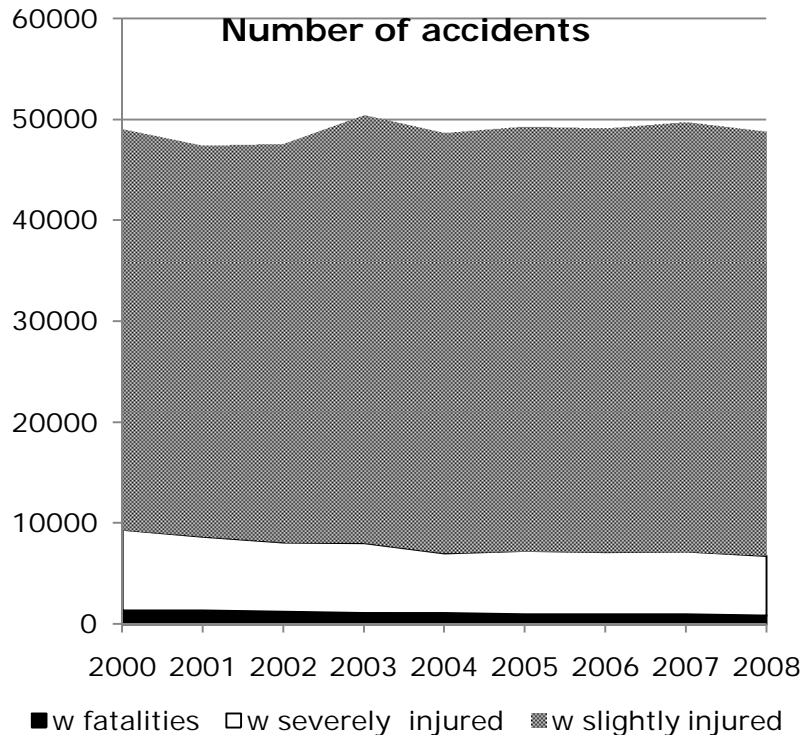
European Road Safety Day, Brussels, 13 October 2010

Bruno Hoornaert, Federal Planning Bureau, Belgium

Social Costs of Road Accidents – *Evolution 2000-2008*



Road Accidents Statistics – *Official statistics*



Source: Directorate-General Statistics and Economic Information (DGSEI)

Road Accidents Statistics – *Underreporting*

- Official statistics suffer from underreporting
 - Belgian figures: only accidents with injured
 - Also part of accidents with injured are not reported
- Degree of reporting depends
 - on the severity of injuries:

	Fatality	Serious injury	Slight injury
Degree of registration	93 %	60 %	15 %

Source: Ministerie van Verkeer en Waterstaat(2006)

- on the road user:

	Pedestrian	Bicycle	Motorbike/ Moped	Car
Degree of registration	20 %	16 %	28 %	68 %

Road Accidents Statistics – *Correction factors*

- The HEATCO-project (EC Research project) proposes correction factors:

Road user	Fatality	Serious injury	Slight injury
Pedestrian	1.02	1.35	2.40
Bicycle	1.02	2.75	8.00
Moped	1.02	1.55	3.20
Motorbike	1.02	1.55	3.20
Car	1.02	1.25	2.00

Source: Bickel et al.(2006)

- Apply this to the number of accidents and injuries
- For light duty vehicles (LDV), heavy duty vehicles (HDV) and busses and coaches (BC) only correction for fatalities

Monetarisation – *Willingness-to-Pay*

- The willingness-to-pay (WTP) indicates a preference to reduce the risk of being injured or dying in an accident
- The UNITE-project (EC research project) proposes a European Standard Value of 1,5 million € in 1998 for the WTP to avoid dying in an accident
- Transferred to Belgium based on GDP/capita
- Adjusted to 2005 price levels, using the consumer price index
- For non-fatal accidents:
 - Seriously injured: 13 %
 - Slightly injured: 1 %
- Construction time series: UNITE-project recommends adjusting the value linearly with GDP/Capita

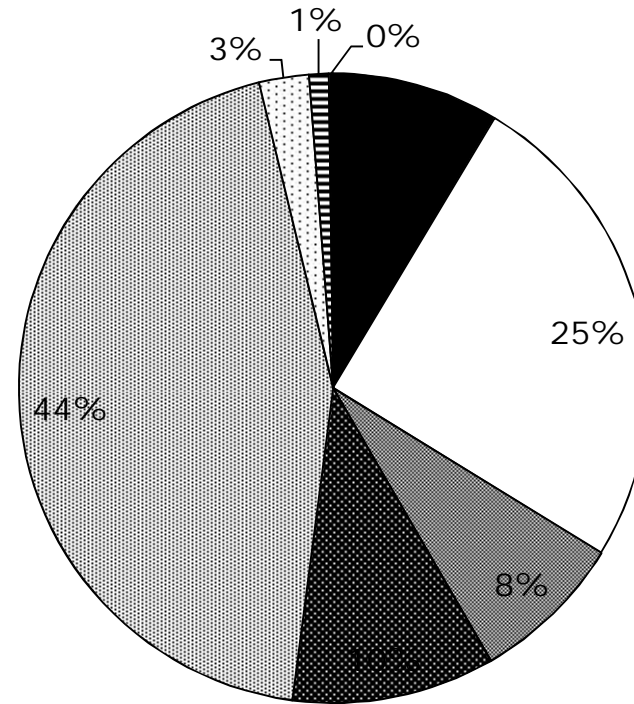
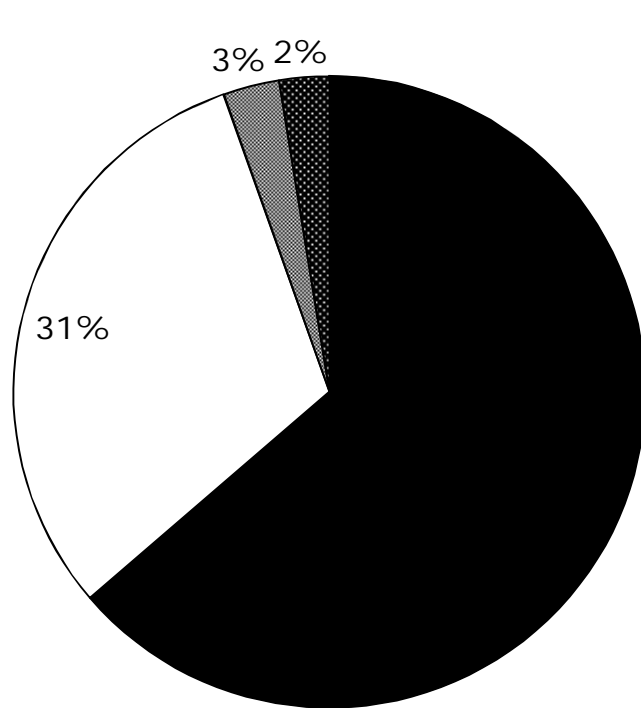
Monetarisation – *Pure economic costs*

Cost per accident		Cost per casualty			
			Fatality	Seriously injured	Slightly injured
Administrative costs	275	Medical costs	3044	9831	455
Damage to vehicles	3066	Ambulance	362	362	47
Damage to public domain	6	Visiting costs	20	140	0
Police	25	Funeral	1696	0	0
Fire service	821	Production losses	66630 (net)	426500 (gross)	365 (gross)
Legal court	34				
Legal aid	98				
Total	4325	Total	71752	436833	867

Source: De Brabander(2005)

Production losses: for the construction of time series, the value varies linearly with GDP/Capita

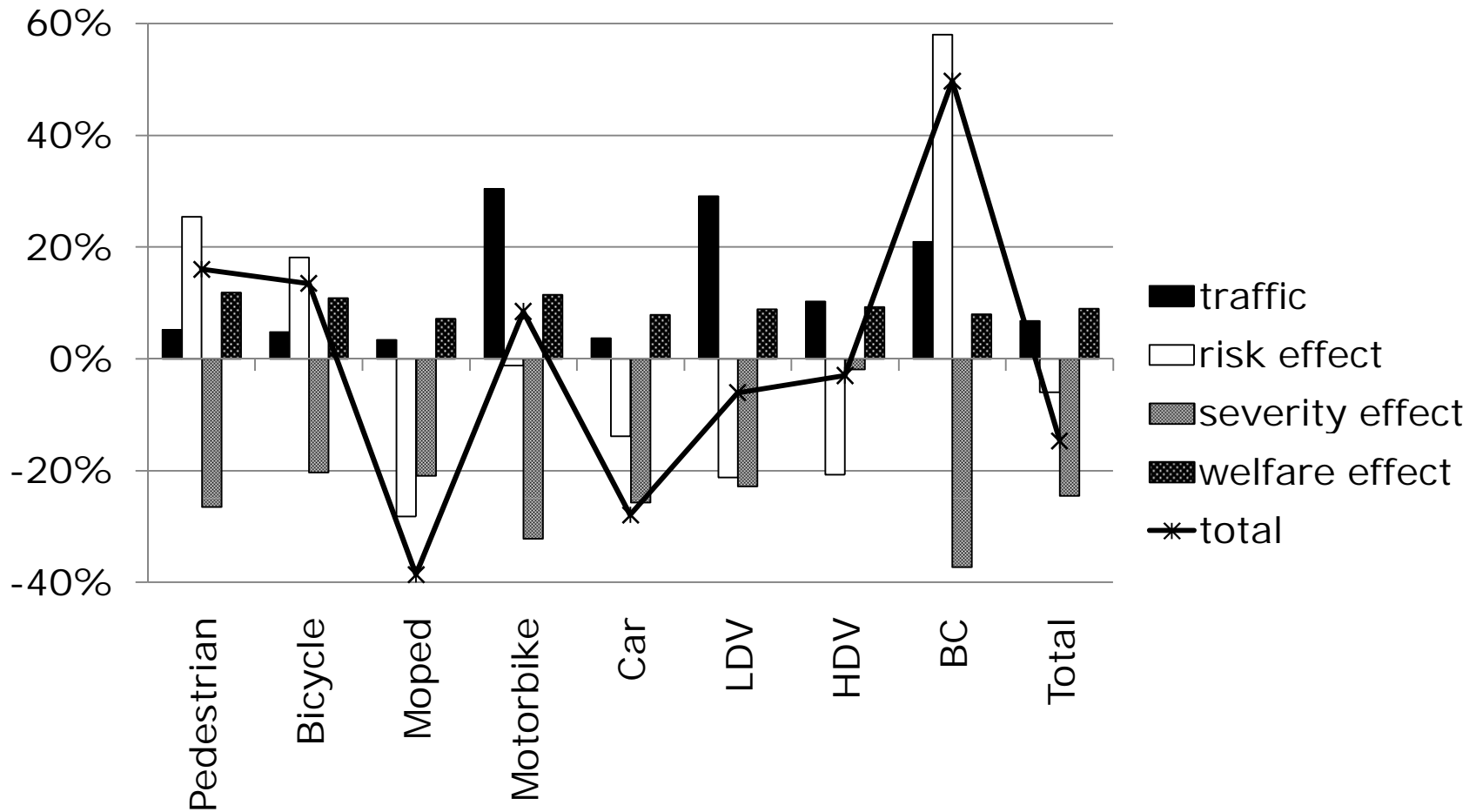
Social Costs of Road Accidents – Results 2008



WTP
 Productions losses
 Damage to vehicles
 Other

Pedestrian
 Bicycle
 Moped
 Motorbike
 Car
 LDV
 HDV
 BC

Decomposition analysis - % change in 2008 compared to 2000



Social Costs of Road Accidents - *Conclusions*

- Social costs of road accidents:
 - dropped by 14,0 %, but
 - grew for pedestrians, bicycles and motorbikes between 2000 and 2008
- WTP accounts for 2/3 of total social costs
- Without correction for underreporting, total social costs would be 37,4 % lower