

Economic Aspects of Electronic Payments in Ireland

IPSO Conference

December 12, 2006

Colm McCarthy, UCD



Three Topics

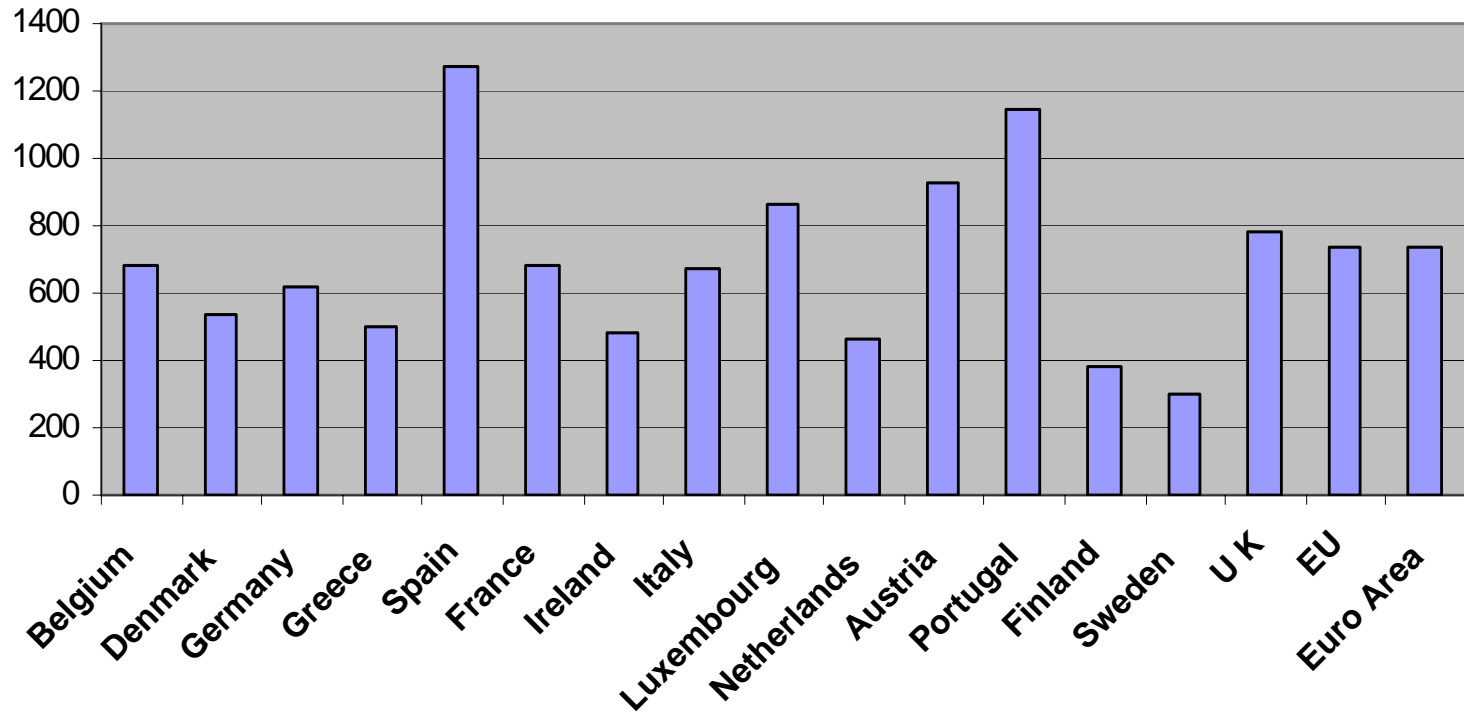
International Comparisons

The Marketing Partners' Survey

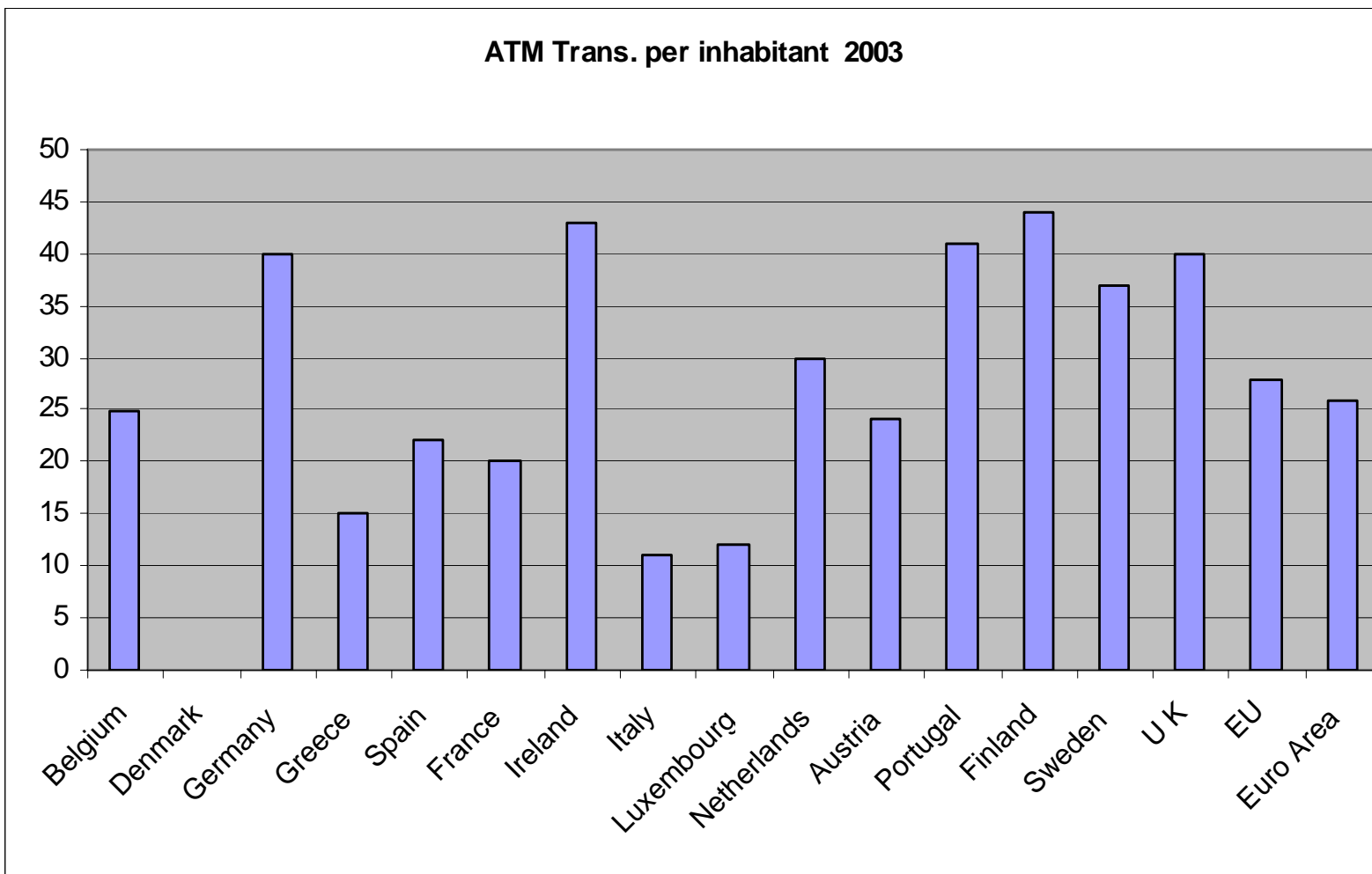
Economic Issues



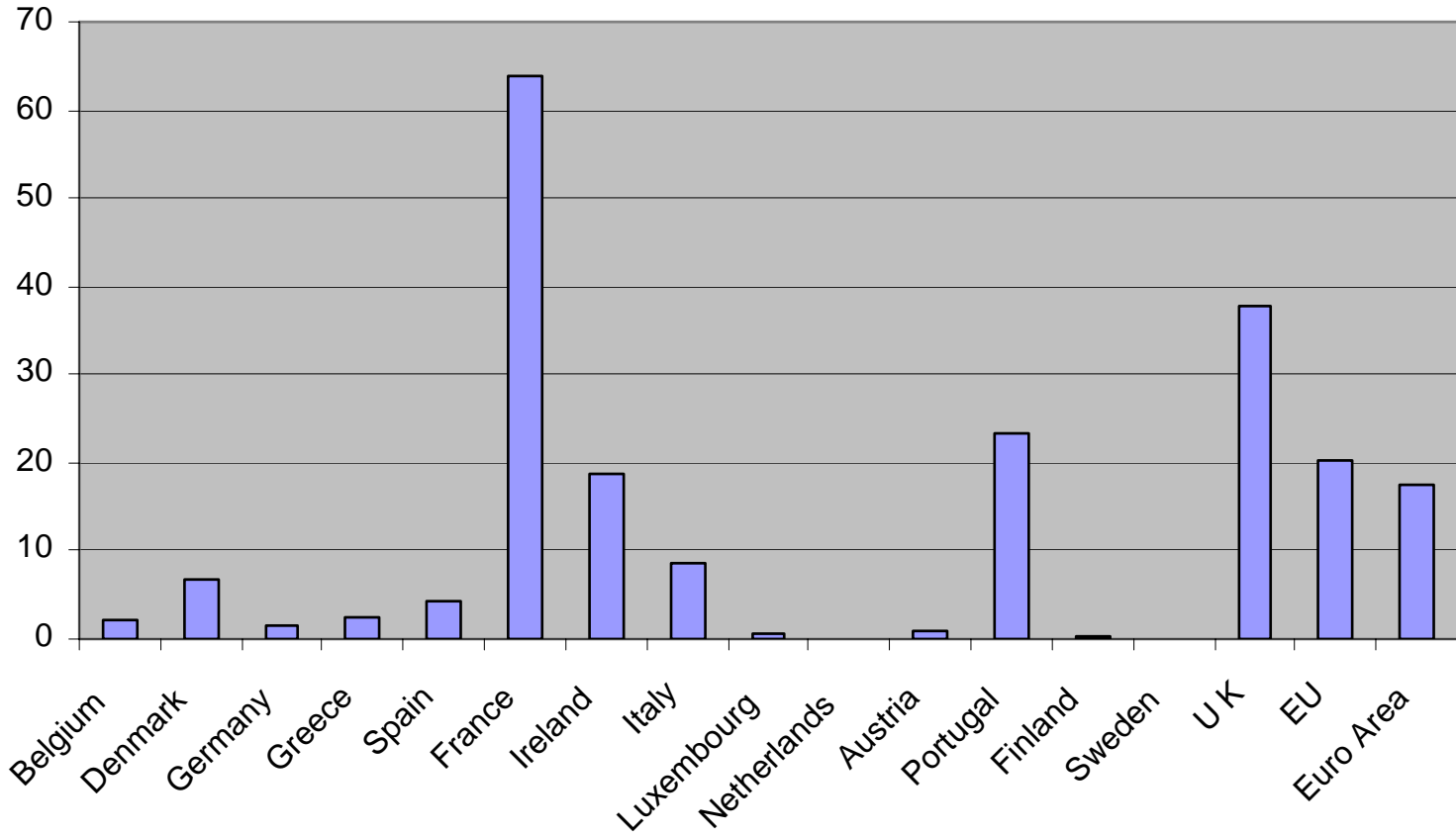
ATMs per 1,000,000 inhabitants (end of year) 2003



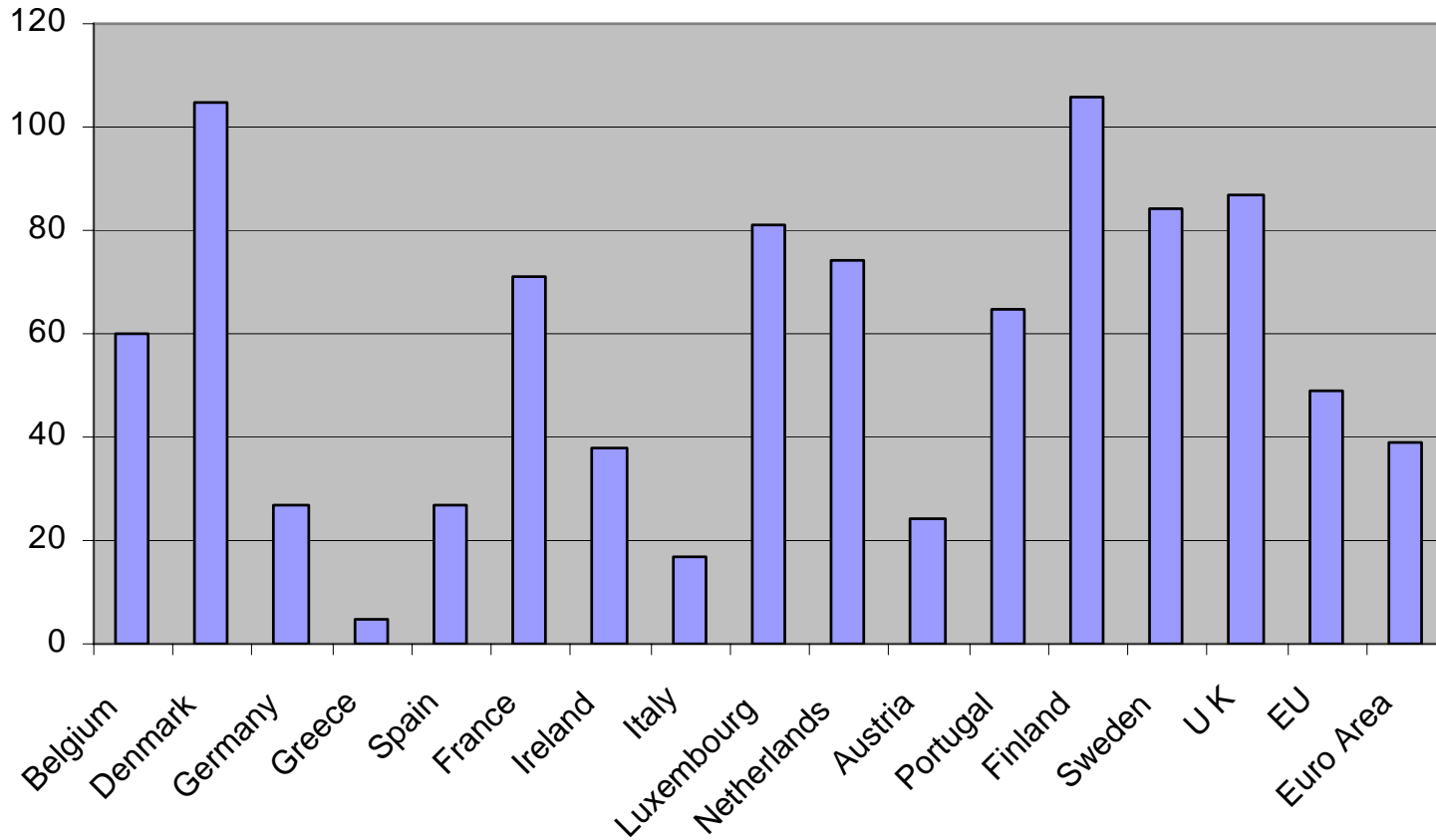
ATM Trans. per inhabitant 2003



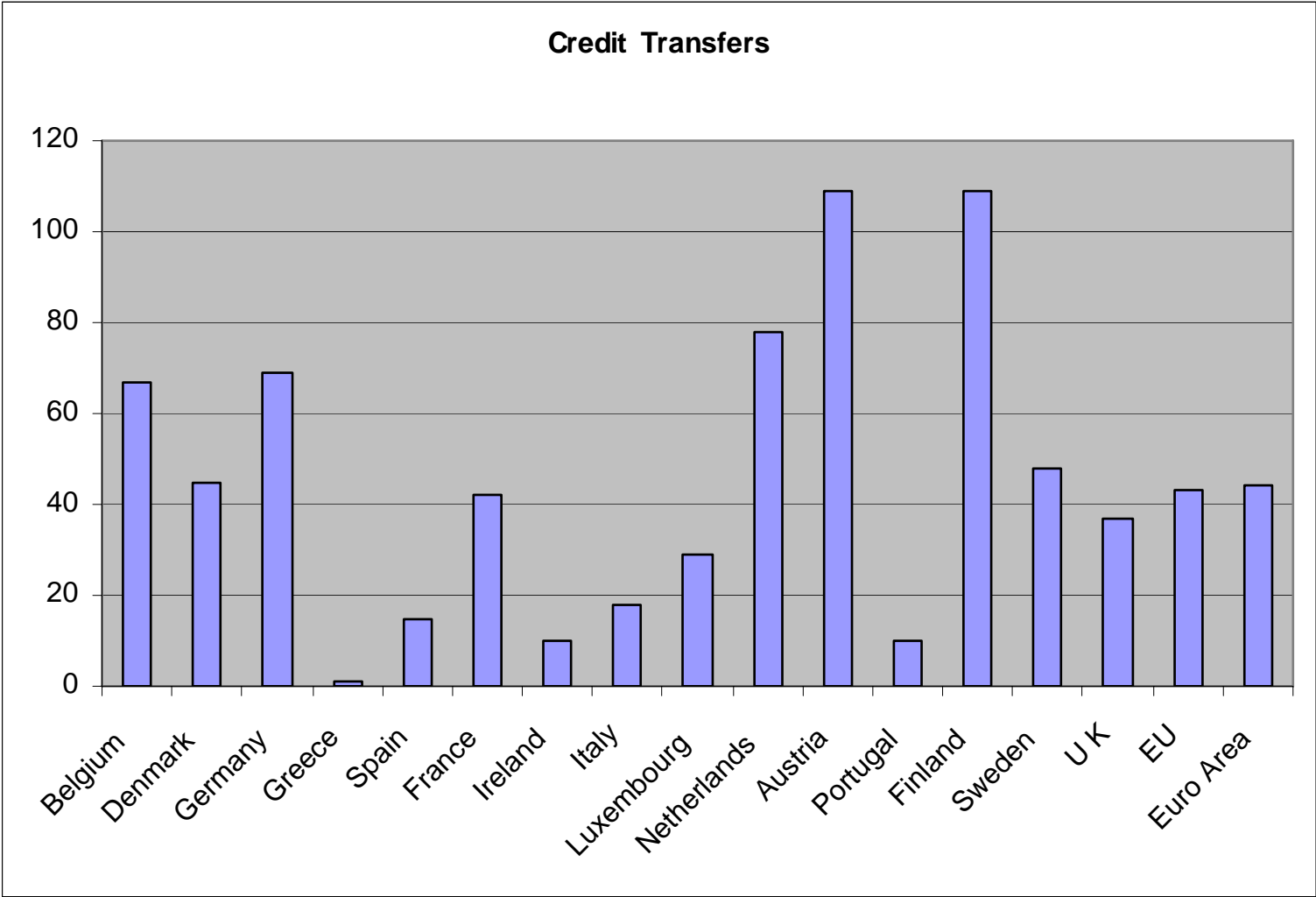
Cheque Transactions 2003



Card Payments 2003



Credit Transfers



Puzzling Data (per capita) for Ireland

	Credit Transfers	Direct Debits
2000	10.54	13.16
2001	9.85	12.96
2002	9.53	9.38
2003	10.25	9.50
2004	11.64	10.40

Source: Blue Book 2006



Decline of Cheques

2000	31.81
2001	22.80
2002	19.07
2003	18.49
2004	17.89

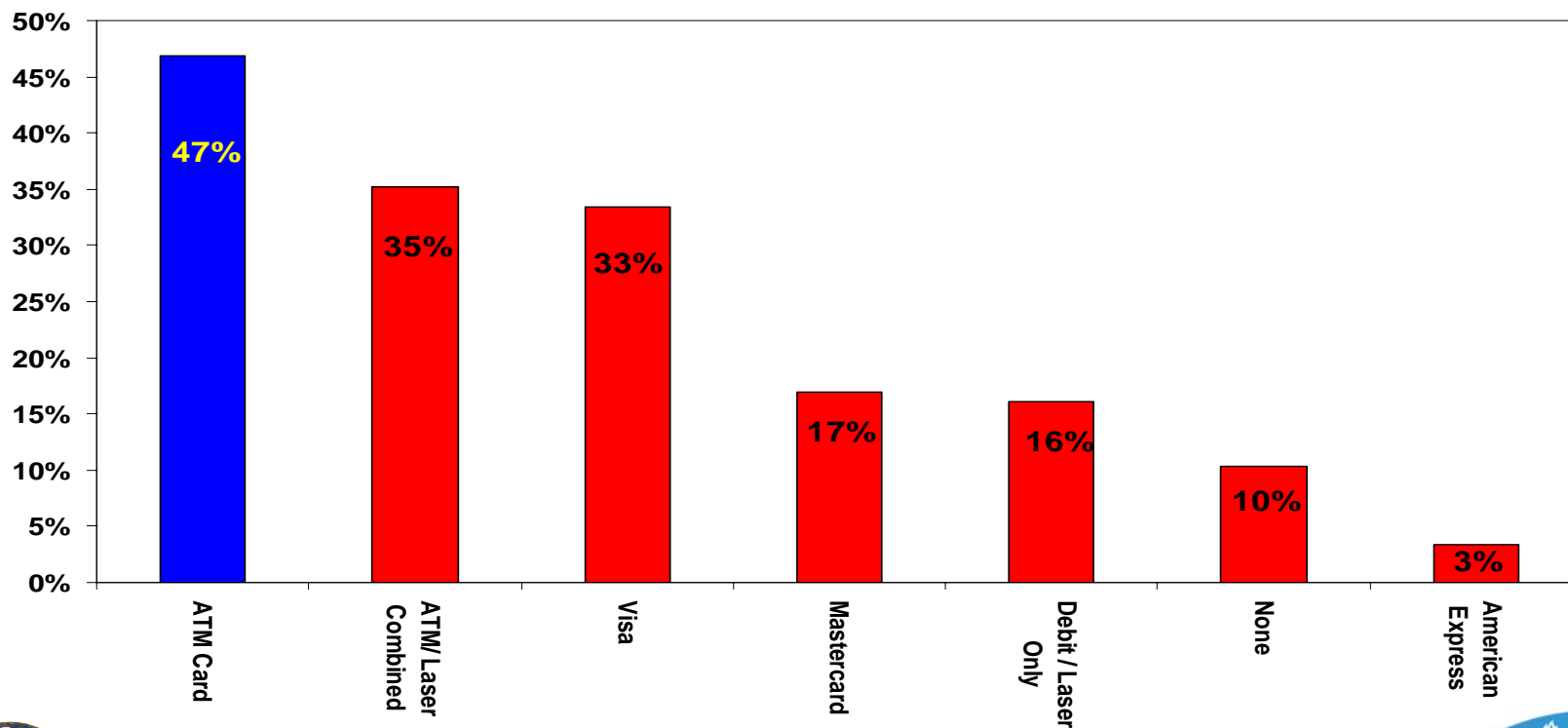
Source: 2006 Blue Book



Card ownership

- Responses are expressed in terms of percentage of total sample. Respondents may own multiple cards hence totals do not sum to 100%.
- ** Diners Club & “Other Cards” have less than 1% of nominations respectively and so are not featured here

Cards Owned



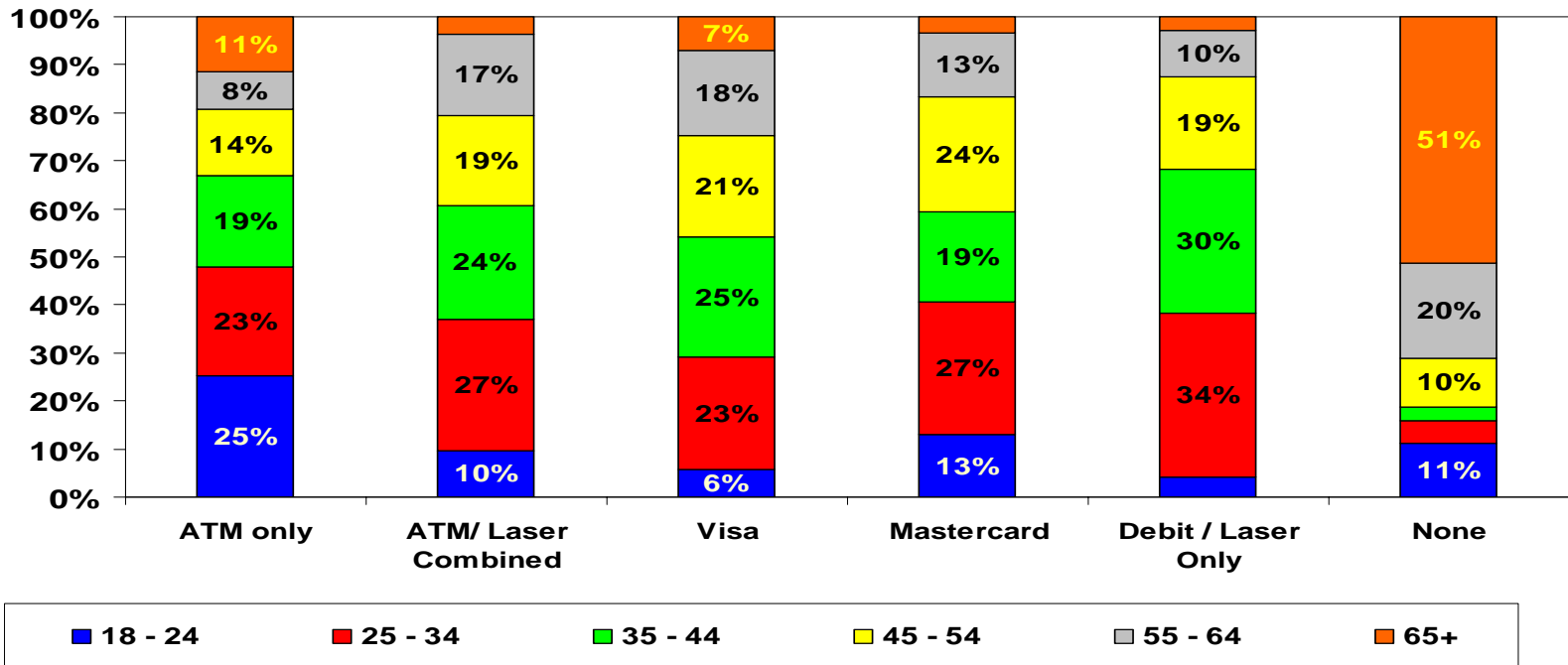
Card Ownership

- 90% of all respondents own a payment / withdrawal card of some sort.
- 82% of all respondents hold an ATM card (35% hold it as a joint ATM / Laser card)
- Visa is the most popular credit card (33%) with twice the ownership level of its nearest rival (Mastercard 17%)
- 8% of respondents hold a card but not an ATM card in any format.
 - ***These respondents all hold a Laser card and 50% hold a credit card.***
 - ***25% of these respondents indicate that they don't use cash at all.***
 - ***They are all aged 18-24 and 60% are female.***
 - ***The percentage involved falls outside the margin of error and indicates that there is a small group of non-cash users in the market.***
 - ***This group have grown up in a card –friendly market and appear to have embraced the Laser card particularly as their means of obtaining cash and making purchases.***
- The age and socio – economic profiles of those who own each card (and those who don't own cards at all) are displayed on the following slides.



Card ownership by age

Card Type Owned by Age



Card Ownership

- ATM cards have the most diverse age and socio profile of all the cards owned with 82% of the population owning an ATM card in some format.
- With the exception of the ATM card, all other payment types have broadly similar age and socio –economic profiles.
- ABCD – White Collar Professional as expected is the largest socio group in all card categories.
- The majority of Laser card owners (both with ATM and on their own) are in the 25-44 age group
- Visa card have twice the ownership level of Mastercard. Mastercard however are providing competition for them in the younger age group with 13% of Mastercard customers aged 18-24 while 6% of Visa customers are in the same age group.
- 71% of those who do not own cards are aged 55 +, 51% are aged 65+



Card Ownership Summary

Please note that all percentages are expressed in terms of the sample.

Card Ownership Summary	%
1. The % who own a payment / withdrawal card at all	90%
2. The % who own an ATM card at all	82%
2A. The % who own an ATM card <u>and no other card</u>	24%
3. The % who own a Laser Card (in some form) at all	52%
3A. The % who own a Laser Card in some format <u>and no other card</u>	10%
4. Those who own a Credit Card at all	54%
4A. The % who own a Credit card in some format <u>and no other card</u>	3%
5. The % who own a Laser or Credit card at all *	66%
6. The % who own all 3 card types (ATM / Laser Card / Credit Card)	8%
7. The % who own an ATM Card and a Credit Card	40%
8. The % who own an ATM Card and a Laser Card (<i>Not a combined Card</i>)	8%
9. The % who own a Credit Card and Laser Card at all **	26%

**10% do not have a card and 24% have an ATM card only, the remainder (66%) have either a Laser Card / Credit Card or both.*

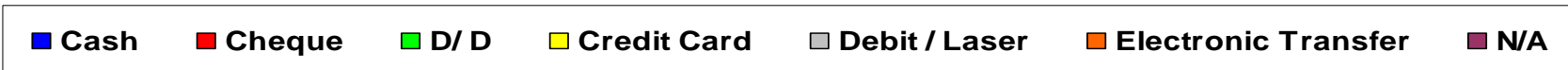
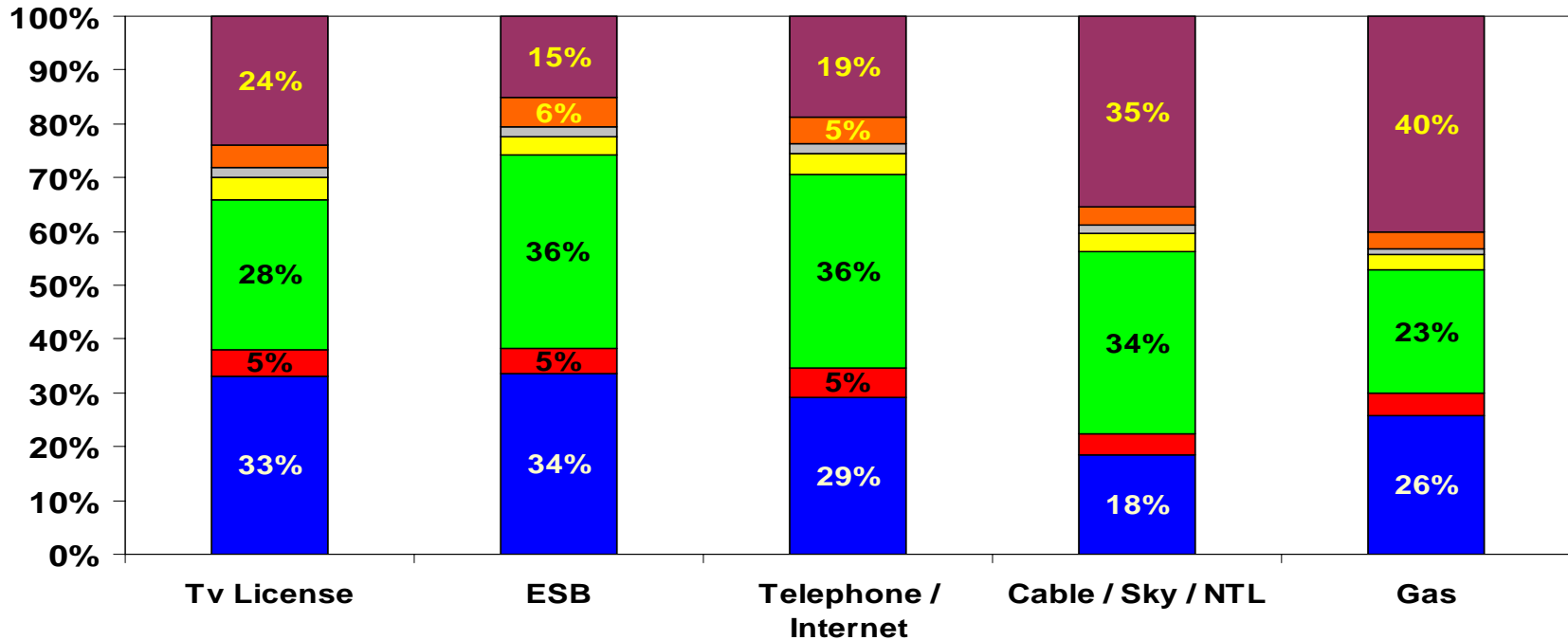
*** 23% own a Laser Card and 1 Credit Card, 3% own a Laser card and more than 1 credit card.*



Payment types used by occasion - Utilities

- Each column is based on the entire sample.
- *N/A's can be interpreted as those who live at home and don't pay bills or as those have the particular utility installed.*

Utility by Payment type



Those who pay Utilities by cash

Age Groups	Age Composition of Those Who Pay Utilities by Cash	Age Composition of Cash Users	Sample
18-24	11%	15%	17%
25-34	16%	19%	22%
35-44	13%	16%	18%
45-54	16%	16%	16%
55-64	20%	17%	12%
65+	24%	16%	15%

Socio Groups	Age Composition of Those Who Pay Utilities by Cash	Socio Composition of Cash Users	Sample
ABCD	25%	31%	33%
EF	11%	12%	12%
GHIJ	6%	6%	7%
Housewife	13%	13%	13%
Retired	34%	23%	21%
Student	9%	12%	12%
Unemployed	2%	2%	2%



Payment Type Share by Age Bracket

Age Breaks	Cash	Cheque	D/D	Credit Card	Laser Card	Electronic Transfer
18 - 24	96%	6%	27%	33%	13%	4%
25 - 34	94%	11%	59%	59%	42%	11%
35 - 44	95%	13%	56%	55%	37%	10%
45 - 54	92%	28%	66%	62%	29%	7%
55 - 64	97%	17%	42%	45%	23%	6%
65+	97%	14%	27%	23%	9%	10%

▪ This table displays the percentage of respondents within each age category who indicated using the various payment methods. E.g. **66%** of those in the **45-54** age group use Direct Debit at all. **29%** in the same age group use Laser Card.



Credit/Debit card users

Age Groups	Age Composition of Card Users	Age Composition of the sample
18 - 24	9%	17%
25 - 34	27%	22%
35 - 44	20%	18%
45 - 54	20%	16%
55 - 64	17%	12%
65+	7%	15%

Socio Groups	Socio Composition of Card Users	Socio Composition of the sample
Professional	47%	33%
Skilled Manual	12%	12%
Unskilled Manual	4%	7%
Housewife	16%	13%
Retired	12%	21%
Student	8%	12%
Unemployed	1%	2%

The age and socio profile of those who indicate using Credit / Debit Cards has been compared with the profiles of the sample as a whole to identify behavioural differences between the age groups.



Demographics of those who will not switch to cards

- 68% of all those who will not switch no matter what is offered are over the age of 65.
 - This demographic are most likely to have no card or to only own an ATM card but no other.
 - They are also most likely to only pay cash for all their bills.
 - Over 65's tend to be the demographic who do not use Laser Cards even when owning them.
- Overall this age group have shown themselves to be entrenched in the manner in which they pay their bills and are unlikely to break their habits in this regard.



Cheque users

Age Group	Age Composition of Cheque Users	Age Composition of the Sample
18 - 24	5%	16%
25 - 34	14%	22%
35 - 44	15%	19%
45 - 54	28%	16%
55 - 64	25%	13%
65+	14%	14%

Socio Group	Socio Composition of Cheque Users	Socio Composition of the Sample
A B C D	46%	33%
E F	8%	12%
G H I J	4%	7%
Housewife	18%	13%
Retired	20%	21%
Student	3%	12%
Unemployed	1%	2%

The age and age and socio-economic profile of those use cheques is displayed in the above table. It has been compared with the profiles of the sample as a whole to identify behavioural differences between the groups.



Who does not access the internet?

Age Groups	Age Composition of Non- Internet Users	Sample
18-24	6%	16%
25-34	6%	22%
35-44	8%	19%
45-54	12%	16%
55-64	25%	13%
65+	43%	14%

Socio Groups	Socio Composition of Cash Users	Sample
ABCD	10%	33%
EF	8%	12%
GHIJ	6%	7%
Housewife	9%	13%
Retired	59%	21%
Student	3%	12%
Unemployed	5%	2%

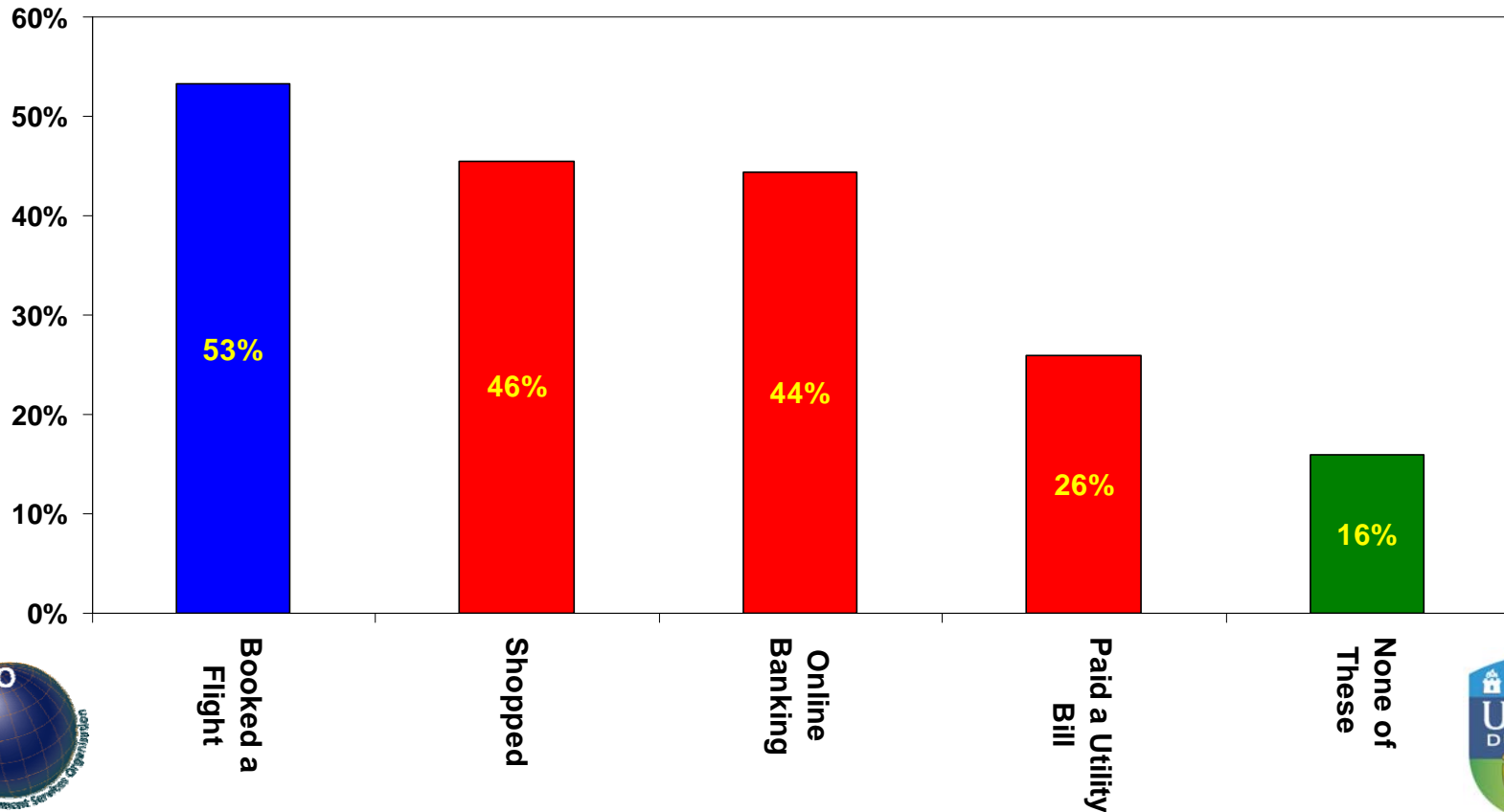
The age and socio profile of those who do not access the internet displayed in the above table. It has been compared with the profiles of the sample as a whole to identify behavioural differences between the groups.



Usage of the internet in the last 12 months

- **24% of respondents stated they have no access to internet.**
- **Responses are expressed in terms of the 76% who do have internet access.**
- **Respondents may have used multiple online activities in the last 12 months hence totals do not sum to 100%**

Activities Transacted Online in the Last 12 Months



Are the sites you used user friendly?

	Yes	No	Not Sure
Online Bank User Friendly	94%	4%	2%
Utility Bill User Friendly	92%	5%	4%
Retail Site - User Friendly	90%	6%	4%
Airline Site User Friendly	94%	4%	2%

Those who had indicated carrying out these activities in the last 12 months were asked whether they felt the websites of companies in each of the categories were user - friendly



Ryanair's bolt to the web

Call-centre only, travel agents, until 1999.

- Late starter - easyJet earlier to Web
- Website launched January 2000
- Expected 20% migration to web in Year 1
- Overnight success - 58% in Year 1



Ryanair's Distribution Channels

<u>Year</u>	<u>% Call Centre</u>	<u>% Web</u>	<u>Traffic Growth %</u>
1999	100	nil	-
2000	42	58	30
2001	18	82	34
2002	9	91	43
2003	3	97	46
2004	2	98	26
2005	1	99	19
2006e	0.5	99.5	32

Source: Ryanair



Ryanair and other LCCs – A special case?

- Timing of shift to electronic payment linked to a distribution platform shift
- Compelling product offer - look at the sales growth
- *No Credit Sales!* Producer free to dictate payment method
- Cost savings reflected in pricing
- Many utilities in different position *but* LCC's offer mass market product, large low-income (including unbanked) customer base
- Aer Lingus web % (2005) 71%, easyJet (2006) 95%



ATMs per Million Pop at mid-2006

<u>Country</u>	<u>ATMs</u>	<u>Country</u>	<u>ATMs</u>
Belgium	673	Italy	632
Germany	634	Luxembourg	878
Greece	492	Netherlands	463
Spain	1,299	Austria	901
France	695	Portugal	1,039
Ireland	700	Finland	321

EURO-12 Average at mid-2006 was 743
Ireland = 64% of Euro-12 Avg at end-2003,
= 94% in mid-2006

Source: ECB, Eurostat



Costs *and* Benefits of payments media

- Many studies focus only on costs
- Benefits also vary
- What matters is marginal net social cost, that is, after allowing for benefits
- Minimising costs alone may not be optimal
- Sum of net benefits for all parties (consumers, merchants, banks, Government) is what matters
- Seigniorage, for example, not a social benefit, just a transfer



US Grocery 1998: Net Social Marginal Costs %

Transaction Size	\$11.52	\$54.24
Cash	6.9	2.1
NV Cheque	8.6	2.2
V Cheque	7.6	1.6
Credit/Charge	6.9	1.3
Signature Debit	6.6	1.5
PIN Debit	6.1	1.4

Source: Swartz et al, Rev Network Economics June 2006



US Electronics 1995: Net Social Marginal Costs %

Transaction Size	\$64.98	\$124.96
Cash	1.6	0.8
Cheque	1.0	0.5
MC/Visa	0.9	0.2
Signature Debit	1.4	0.8

Source: Swartz et al, Rev Network Economics June 2006



Why high denomination notes?

Denomination of the Euro Note Issue October 2006

	<u>No.</u>	<u>in €m</u>	<u>% by value</u>
€500	407	203,228	34.2
€200	150	29,925	5.0
€100	1,059	105,938	17.8
€50	3,764	188,204	31.6
€20	2,157	43,144	7.3
€10	1,785	17,850	3.0
€5	1,288	6,440	1.1
Total	10,610	594,729	100.0



Transaction Demand for high-denom notes

1. Illegal Transactions

- i. Drugs
- ii. Stolen Goods
- iii. Tax Evasion (including transactions taxes)
- iv. Appears to be a particular problem in Spain, where 30% of the €500 notes are circulating

2. Legal Transactions

- i. Second-hand non-dealer markets
- ii. Betting



Welcome to Buy & Sell

- Published three times weekly, plus regional editions
- Combined ABC 84,000 per week

Twin-Axle Trailer, Midlands	€1,200
Kayak, Limerick	€1,100
Horsebox, Clare	€2,500

- Horse Fairs, Cattle Jobbers
- Bookies (gambling debts are not enforceable)
- Why Cash? Legal tender, no credit risk, no return trips



The Demand for Cash

- * Big illegitimate demand for large notes, both inside and outside the EU
- * But legitimate demand also
- * Legitimate demand for smaller notes
- * Cash most vulnerable for middle-sized transactions



Maximising the Cost/Benefit Balance

The Swartz et al US estimates seem the best available

- They would imply large gains in Ireland from a move away from cash/cheques
- Difficult to be precise about figures
- Irish reliance on cheques excessive
- Hole-in-the-wall culture in a Laser-enabled society?



Encouraging a Move from Cheques

- * There are Strong Vintage Effects Driving Down Cheque Usage.
- * Financial Times 5th. August: Currys, Shell in UK have banned cheques.
- * Asda (Wal-Mart) is trialling a ban.
- * Section 149 preventing proper differentiated charges?
- * Cheques should cost more to use?



Vintage Effects are Slow

- Do nothing and cheques, cash, will decline
- But a very slow process
- Failure to reflect cost/benefit balance in prices to the end-user
- Alternative media should compete on price
- Implies willingness to let cheque charges rise, discounts for use of electronic payments
- Government should avoid taxes or regulatory policies which create or accentuate distortions: SEPA is coming too



Payments Audit for Utilities, State Agencies?

- The utilities have a big role to play regarding receipts from the public
- So have State agencies (Social Welfare, PMG, local authorities), regarding both payments and receipts
- How user-friendly are they all on receipts? What targets for electronic are reasonable for each?
- How pro-active are they on payments?
- Role for IPSO Working Group to prepare a score-card?

