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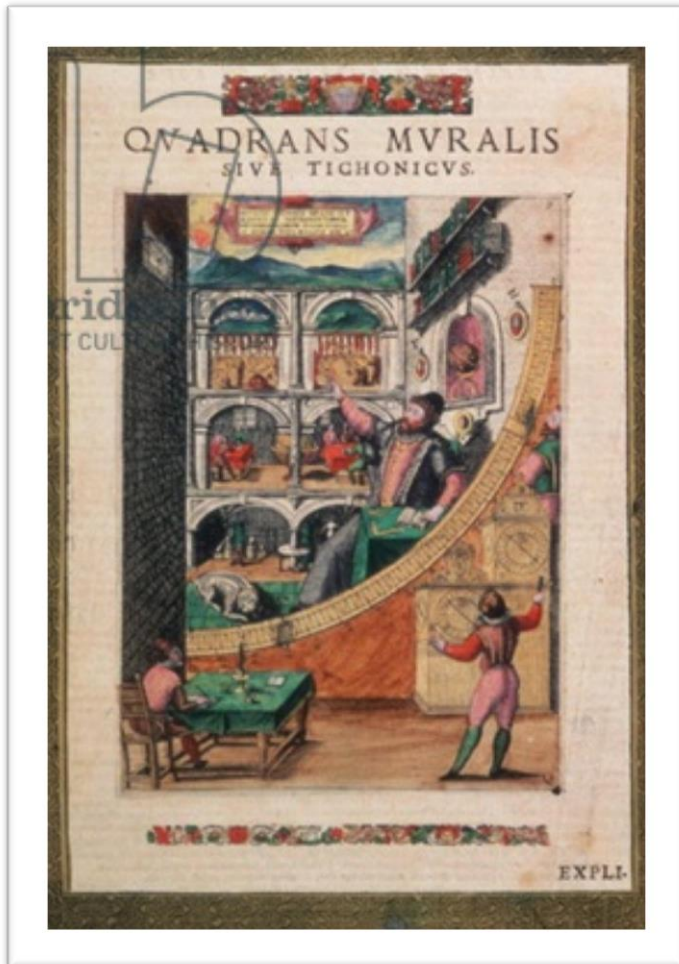


# Payments Innovation and The Future of Cash

ESTA Annual Conference | Marseilles, France

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3 June 2013



**The Cashless Society**

—*The Economist* -1966

**Sweden Could be First Country to Go Cashless**

—*Daily Mail* - 2012

**Living High Without Money**

—*New York Times* -1956

**Money's destiny is to become digital**

—*OECD*- 2002

**United States – a cashless society?**

—*Desert News (Salt Lake City, UT)*- 1978

**Banks to spend £50m in move towards a cashless society**

—*The Times* - 1983

**Paper Losses: As Cash Fades America Becomes a Plastic Nation**

—*Wall Street Journal* - 2004





***“There will be a time... I don’t know when. I can’t give you a date... when physical money is going to cease to exist. 95% of transactions in America, or more, now have nothing to do with physical pieces of paper or coins.”***

—Robert Reich, American political economist, professor, author, and political commentator. He served in the administrations of Presidents Gerald Ford and Jimmy Carter and was Secretary of Labor under President Bill Clinton.

Source: CBS News Report, originally aired on “CBS Sunday Morning,” July 24, 2012



***“22 or 32 years from now will cash still be here? I think we can put it in the grave already. It’s really expensive... to move it, store it, secure it, inspect it, shred it, redesign it, resupply it and around and around we go.”***

—David Wolman, American journalist and author. He is a contributing editor to Wired magazine and the author of “The End of Money: Counterfeiters, Preachers, Techies, Dreamers and the Coming Cashless Society.”

Source: CBS News Report, originally aired on “CBS Sunday Morning,” July 24, 2012



- Will cash die?
- How long does it have?
- Where will cash die first?
- Who will be the last to bid it adieu?

if adieu;

- Who will be the last to bid

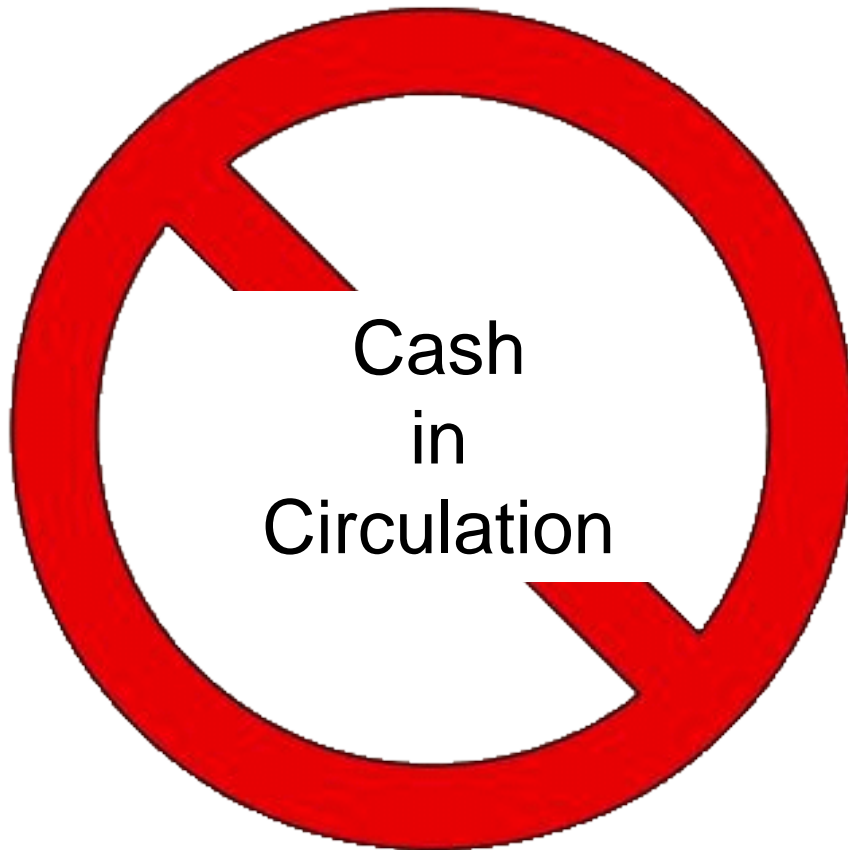
No!!!!

*(...or at least not any time soon...)*



## Observation Number One:

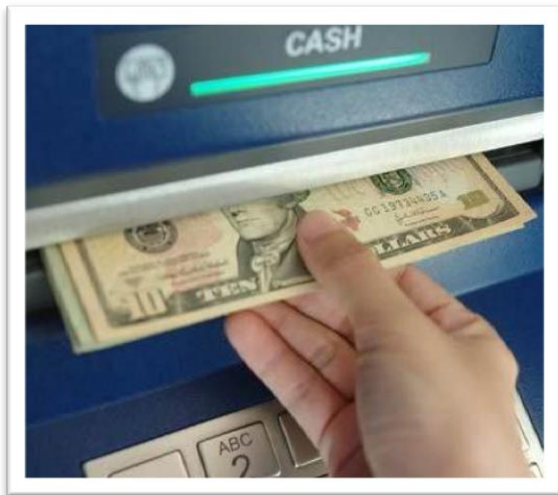
No One Has Accurately Measured How People Use Cash to Pay for Things



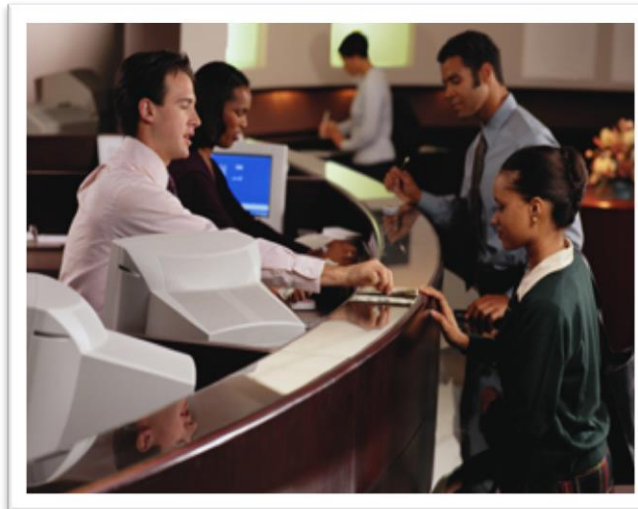
Measures the *inventory* of cash ...

...not how people *use* cash

Measuring cash usage means measuring the flow of cash. That starts with looking where cash is available to people.



**ATM**



**OTC (Over The Counter)**



**POS (Point of Sale)**

**Note:**

- Many countries do not provide cash back at point of sale.
- Measure excludes cash recycling which is around 15 percent of cash use in Eurozone and therefore understates total cash use by this amount.
- ATM+OTC+POS measures “flow” of cash for consumer spending while total notes measure the “stock of cash” and includes significant cash hoarding.



### Observation Number Two:

Overall Cash Usage Can Grow Even if the Share of Spending in Cash by Consumers is Declining



### Share of Spending

The “Propensity to Use Cash” or the Slice of the Pie that Reflects Cash Usage



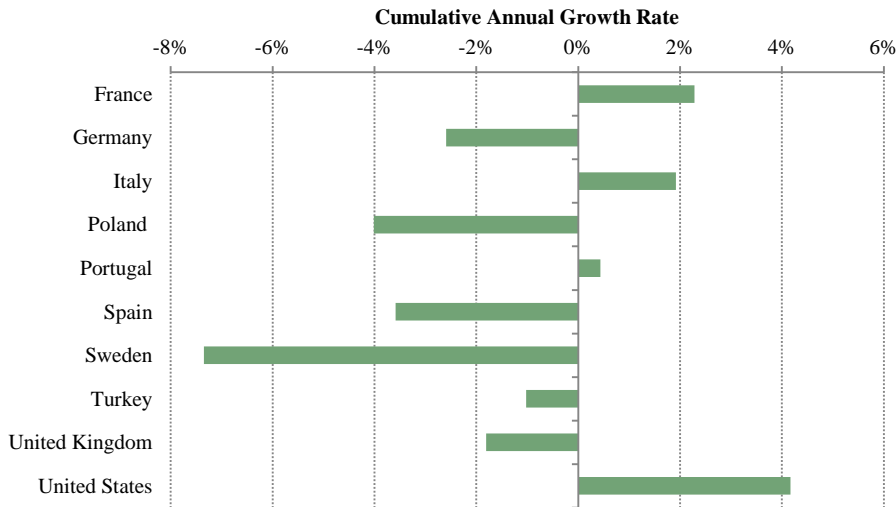
### Total Cash Used

The Share of Spending in Cash x Total Spending (GDP)

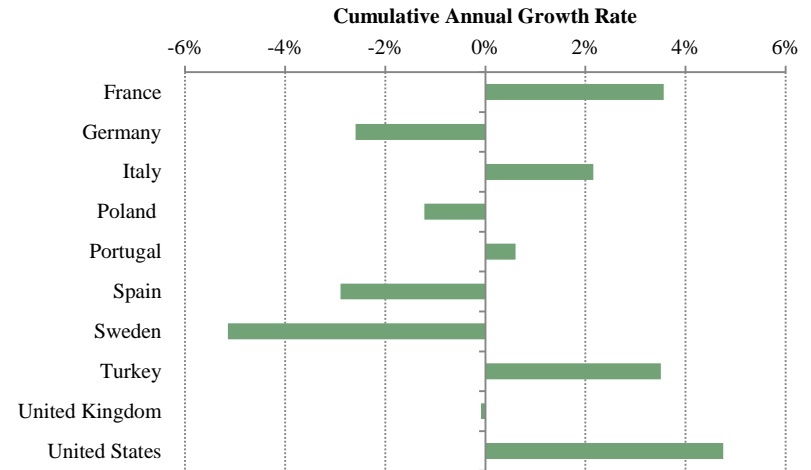
**Consumers *Use of Cash* Declined in 6 Countries and Grew in 4**

**Total *Use of Cash* Declined in 5 Countries and Grew in 5**

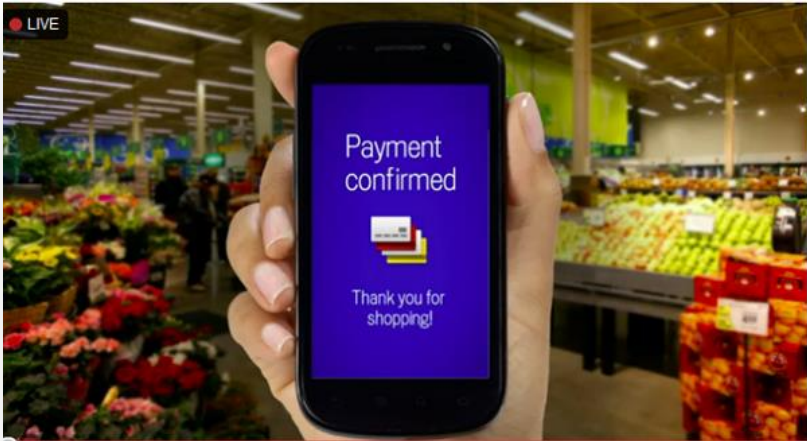
**MPD Projections Cash Propensity CAGR, 2000-2011**



**MPD Projections Real Total Cash Use CAGR, 2000-2011**



# The Future of Payments ... Not Cash!!!



## Observation Number Three: The Future of Cash Will be Determined by 7 Influencers

### THE MPD Cash at Risk framework™

7 Influencers and 35 Factors = MPD Cash at Risk Score™ (CaRS)



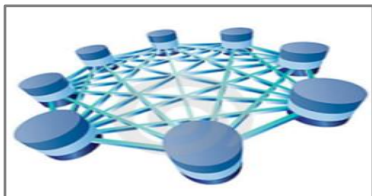
#### Government

Government interest and need to sustain cash differ



#### Economy

Differing growth rates in economies lead to varying growths in overall cash demand



#### Payment Networks

Differing penetration and power of payment networks across countries lead to the existence of new payments schemes in countries



#### Innovators

Diffusion of innovations differs dramatically across countries and conditions for local entrepreneurship of innovations varies



#### Financial Institutions

Banks may make it easier or harder for customers to access cash based on their cost of handling it



#### Merchants

Merchants have varying degrees of interest in investing in card acceptance and new technologies



#### Consumers

Differing attitudes and incentives (driven by taxes, security concerns) over use of digital money as well as differing access to digital money



John | 34 | US



## Influencers that Put Cash-at-Risk™

- Innovators
- Payment Networks

## Influencers that Favor Cash

- Consumers
- Merchants
- Economy

Jane | 53 | UK



## Influencers that Put Cash-at-Risk™

- Innovators
- Payment Networks
- Merchants
- Banks

## Influencers that Favor Cash

- Consumers
- Economy

Jacques | 27 | France



## Influencers that Put Cash-at-Risk™

- Innovators
- Payment Networks
- Government

## Influencers that Favor Cash

- Consumers
- Economy
- Merchants

The higher the Cash-at-Risk Score (CaRS™) the greater the impact the influencers have at putting cash at risk in a particular country.

## MPD CaRS™ For Ten Study Countries 2000 - 2011

Country	Historical Growth in Consumer Use of Cash 2000-2011	Cash-at-Risk Score CaRS™
France	2.3	282
Germany	-2.6	17
Italy	1.9	25
Poland	-4.0	74
Portugal	0.4	6
Spain	-3.6	6
Sweden	-7.4	429
Turkey	-1.0	67
United Kingdom	-1.8	418
United States	4.2	441



### Observation Number Four:

The Future of Cash is Highly Correlated to the Speed at Which Payments Innovation is Adopted in Any Country by Those With Spending Power



18-29 year olds

Smartphone Adoption

70%

Mobile Banking Adoption

44%

Have Used Mobile to Pay  
(via internet)

37%

Spending Power

Less than 50% of their  
parent's generation



45-54 year olds

44%

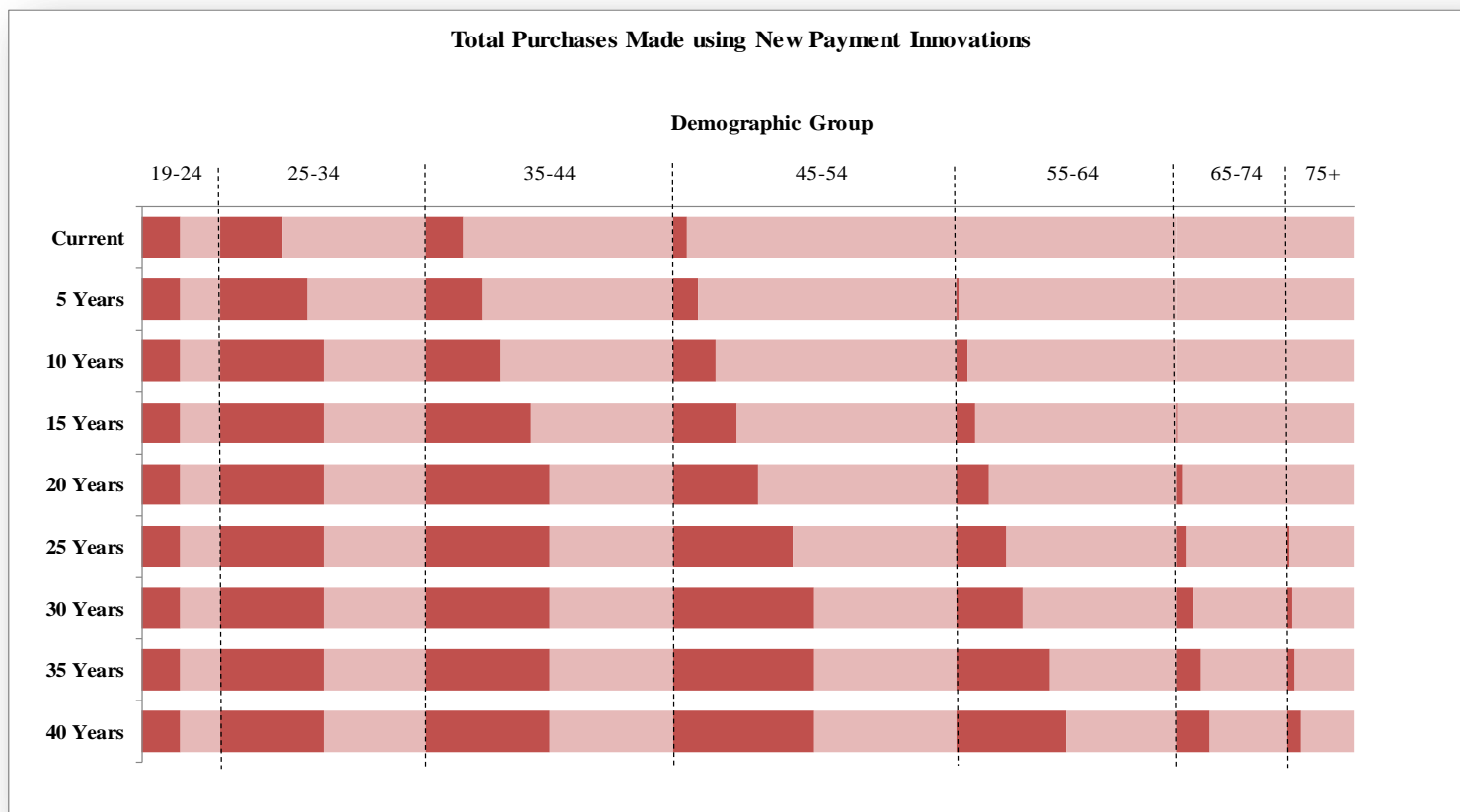
15%

17%

Control more than 70%  
of consumer spend

Note: U.S. data

The MPD Payments Innovation Diffusion Index (PID™) shows that even when younger generations change their behaviors dramatically, it *takes 30 years* to reach a 50% reduction in cash usage by the largest spending group.



Source: MPD Payments Innovation Diffusion Analysis PID™

## Observation Number Five: Measuring the Future Use of Cash Isn't Only About Using Historical Baselines About Usage

### How Consumers Have Used Cash Historically\*

1. ATM Withdraws
2. Over the Counter at Banks
3. Cash back at Stores

**Cash Baseline**

### What Factors Can Put Cash at Risk

1. 7 Influencers
2. 35 Factors
3. Weighted and calculated differently country by country

**CaRS™**

### How Fast Payments Innovation will Move

1. Population growth
2. Spending concentration
3. Velocity of innovation adoption

**PID™**

*\*assumed countries with positive growth in last decade would have zero growth going forward (so cash growth estimates if anything are understated)*

Cash use has *generally not declined* in most countries in the last decade and is likely *to decline only gradually* in most countries in the next decade.

## MPD Projections Total Cash Usage in Ten Study Countries 2012 - 2022

Country	Annual Percent Change in Propensity to Use Cash	Real GDP Growth Rate	Real Annual Change in Total Cash
France	-0.5%	1.6%	1.0%
Germany	-2.0	0.8	-1.2
Italy	-2.3	1.0	-1.4
Poland	-2.0	3.1	1.0
Portugal	-0.2	1.5	1.2
Spain	-0.2	0.9	0.7
Sweden	-4.3	2.7	-1.6
Turkey	-0.7	4.0	3.2
United Kingdom	-1.9	2.0	0.1
United States	-1.4	3.2	1.7
<b>GDP Weighted Average</b>	<b>-1.5</b>	<b>2.4</b>	<b>0.9</b>

**Observation Number Six:  
Innovations Around Mobile and Payments will Impact the Use of Cash but it Will Take a Long Time  
for Major Impacts to be Felt**

### Consumers Use of Cash in the Future

***Declining** but in many countries economic growth means that the total amount of cash being used is still increasing.*



### Payments Innovation

***Increasing** but reducing cash slowly. It takes time for consumers to shift payments habits.*







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Thank You!!!

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