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# Outcomes of a comparative study on retail payment behaviour in China and Germany

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*\* NOTE: Views expressed are those of the authors of the paper and do not necessarily reflect official positions of Deutsche Bundesbank.*

*As this presentation is based on a paper in draft version, please do not cite without author's permission.*

# Agenda

1. Introduction

2. Data / Methodology

3. Main findings

4. Conclusions

5. Market outlook

## Introduction

# Background and scope of the comparative study

## Scope of the study

- **Comparative empirical analysis of payment habits** in China and in Germany
- Identification of potential differences, provision of explanations and, if possible, definition of implications for the future
- Drivers and barriers for innovation in payment services markets



Source: [www.cityweekend.com.cn](http://www.cityweekend.com.cn)

## Background of the study

- China's 2015/16 G20 presidency theme "*Towards the Innovative, Invigorated, Interconnected and Inclusive World Economy*"; Germany's 2016/2017 G20 focus on "*Digital Finance*"
- Idea for joint Chinese-German research project in the area of payments
- Research conducted jointly by Deutsche Bundesbank, Academy of Internet Finance at Zhejiang University, Goethe University Frankfurt with support of GIZ.



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# Main data sources in China and Germany

### Germany: Retail Institute (EHI) survey

- Well-established, annual survey
- 493 companies, ca. 80,000 stores (avg. revenue € 2.97m)
- Rural as well as metropolitan areas (57.6% of total German retail market)
- Payment method categories: Cash, debit card, credit card, electronic direct debit / ELV, retailer cards, others

### China: Own field survey at POS

- Small sample of 160 retailers
- International chains and local stores (avg. revenue: ¥ 28.6m / € 3.9m)
- 3 metropolitan regions (Shanghai, Beijing, Hangzhou)
- Payment method categories: Cash, debit card, credit card, Alipay, WeChat, Union Quick, prepaid cards
- Data partly based on merchant estimates (e.g. payment method shares)

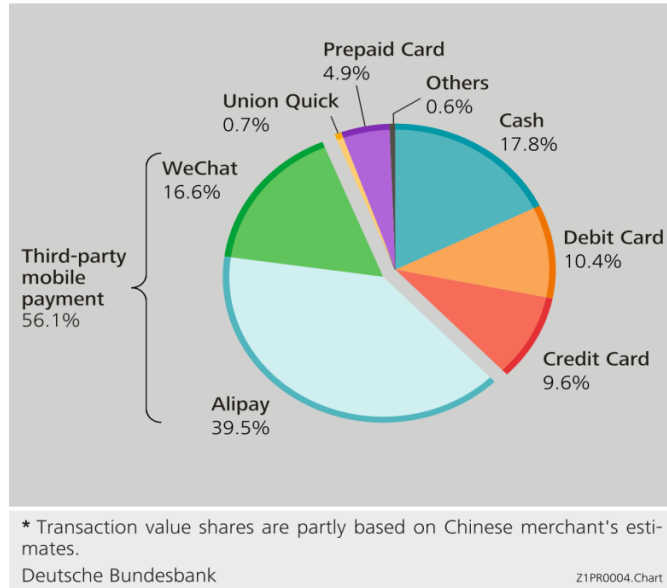
### Complementary sources

- Additional existing studies \*
- Expert opinions/estimates

# Main findings

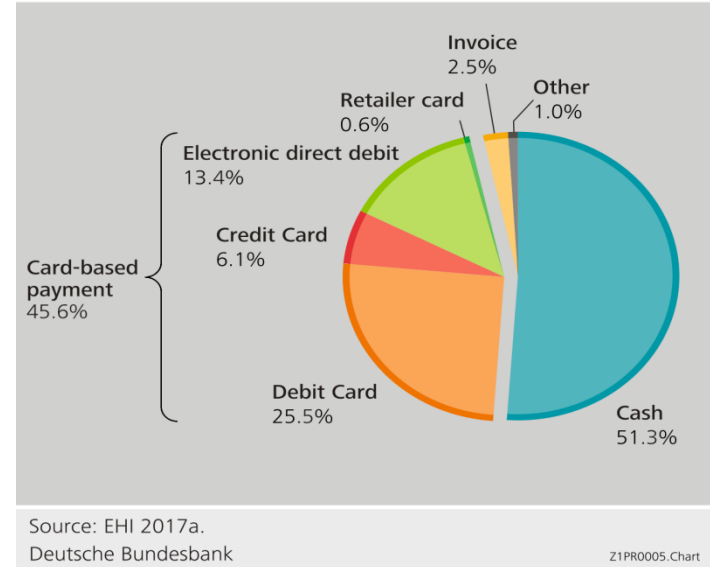
## Differences in payment behaviour at the POS

**China:** Payment method share according to Chinese survey



- Strong role of non-bank / third-party mobile payment providers at the POS in Chinese megacities

**Germany:** Payment method share according to EHI Retail Institute



- Cash and cards preferred in Germany
- No dominant mobile device based solutions (yet)

# Main findings

## Key players in China: Alipay and WeChat

### Alipay

- Payment service provider linked to the Alibaba conglomerate
- Founded 2004 to provide internet payment services for Alibaba online shopping site
- Mobile application launched 2009
- 175 million transactions/day, 60% completed via mobile phone \*\*
- Since 2017 available for Chinese customers at selected German POS

### Alipay and the Alibaba ecosystem \*



### WeChat

- Social platform run by Tencent (806 million users in 2016) \*\*\*
- combines functionalities known from Facebook and WhatsApp (Video calls, “Moments” etc)
- Integrated digital wallet **WeChat Pay**: Customers can pay in various situations, both remote and at the POS

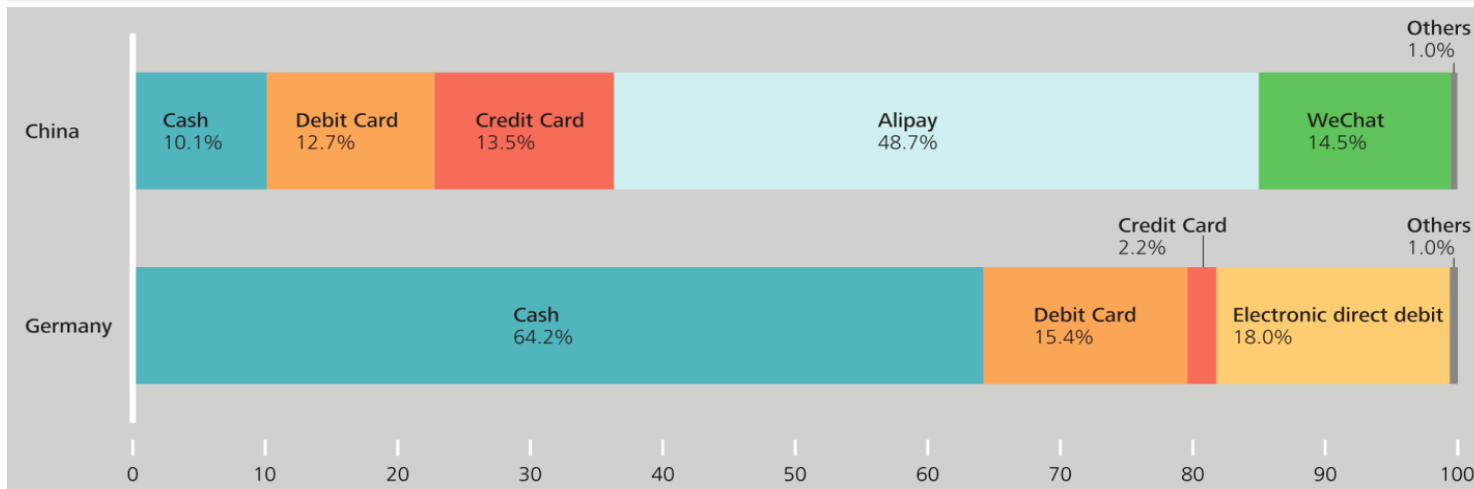


## Main findings

### A closer look: Clothing / sports goods

Comparison of payment method usage in the clothing and sporting goods sector in China and Germany

Figure 4



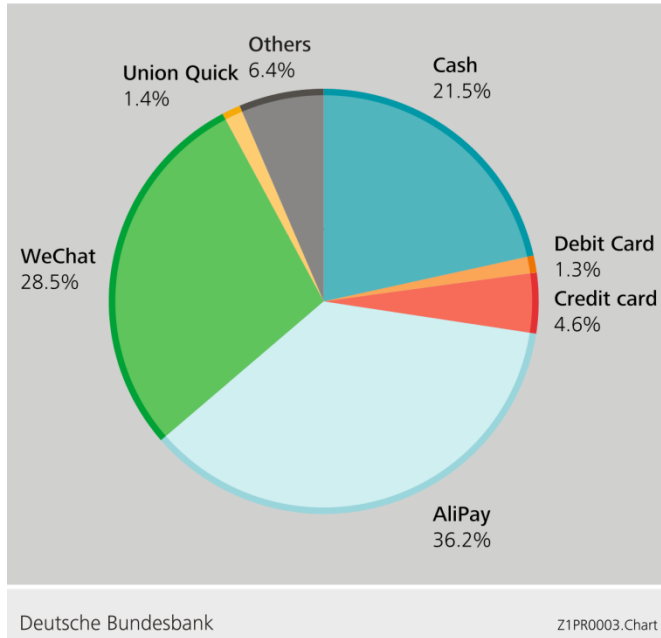
Source: Own representation based on survey results and EHI (2017a).  
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- Mobile payment solutions of Alipay and WeChat Pay account for over 60% of payments in clothing and sports stores in the Chinese sample, while in Germany payments are carried out with cash or cards

## Main findings

### A closer look: Fast-food restaurants and cafes

Payment method share in (fast-food) restaurants and cafés in the Chinese sample Figure 9



- **China:** Alipay and WeChat Pay dominating in fast-food restaurants and cafes. Cash share slightly higher than sample average
- **Germany:** approx. 90 % of revenue in “cafes/bars/snack bars/fast-food restaurants” paid cash \*



# Main findings

## Differences in payment behaviour in situations of daily life

	China	Germany
<b>Brick-and-mortar retail</b> 	Alipay Cash WeChat Pay	Cash Debit card Electronic direct debit
<b>E-Commerce</b> 	Alipay WeChat Pay	Invoice (i.e. credit transfer) Direct debit PayPal
<b>Gas station</b> 	Prepaid card Cash Alipay / Credit card	Cash Debit card Fleet card
<b>Café / Fast food restaurant</b> 	Alipay WeChat Pay Cash	Cash Debit card Credit card
<b>Rent payment</b> 	Cash Alipay	Credit transfer Direct debit
<b>P2P</b> 	Cash WeChat Pay Alipay	Cash Credit transfer Paypal / mobile apps

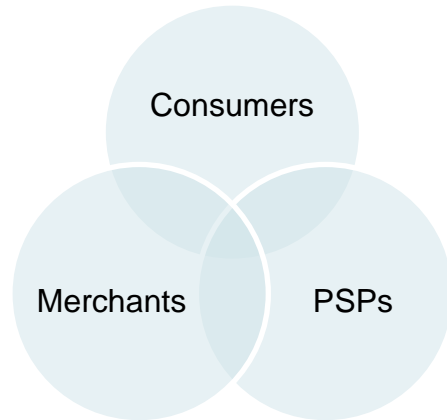
## Conclusions

### Germany: Strong role of banks in the payments landscape

#### Dominance of bank-run payment systems in Germany

- Largest part of payments made via cash, debit card, credit transfer and direct debit, with banks providing essential infrastructure.
- 99% bank account ownership rate\*: A2A payments well-established and widely used e.g. for recurring payments

#### Low adoption of mobile payment solutions



- Lack of consumer demand \*\*
- Low willingness to invest into new payment solutions
- Critical mass / chicken and egg problem
- Standardization challenge
- Distrust from consumers \*\*\*

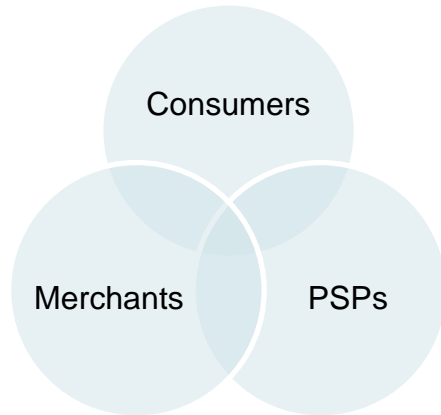
## Conclusions

### China: Leapfrogging to mobile solutions

#### Strong role of non-banks and “leapfrogging” in China

- Strong market presence of **non-bank** payment providers (Alipay, WeChat)
- “**Two worlds**”: High adoption of innovative mobile payments in metropolitan regions vs. reliance on cash, notably in rural areas
- “Leapfrogging” hypothesis

#### Drivers of the emergence of Alipay and WeChat



- Critical mass to start with
- Trust of consumers
- Low investment cost for merchants
- Banks less dominant in payments than e.g. in Germany
- Non-bank PSPs offering added value to consumers and merchants

# Market outlook

## Potential future developments

### Germany

- Adoption of mobile payments at the POS in Germany?
  - ✓ Smartphone as customer's constant companion
  - ✓ Ubiquity of mobile Internet
  - ✓ POS infrastructure (establishment of NFC-ready terminals well advanced)
    - *Customers will to use offered solutions?*
- **Instant Payments** as a possible driver
- **Internet giants** as leading payment market players?

### China

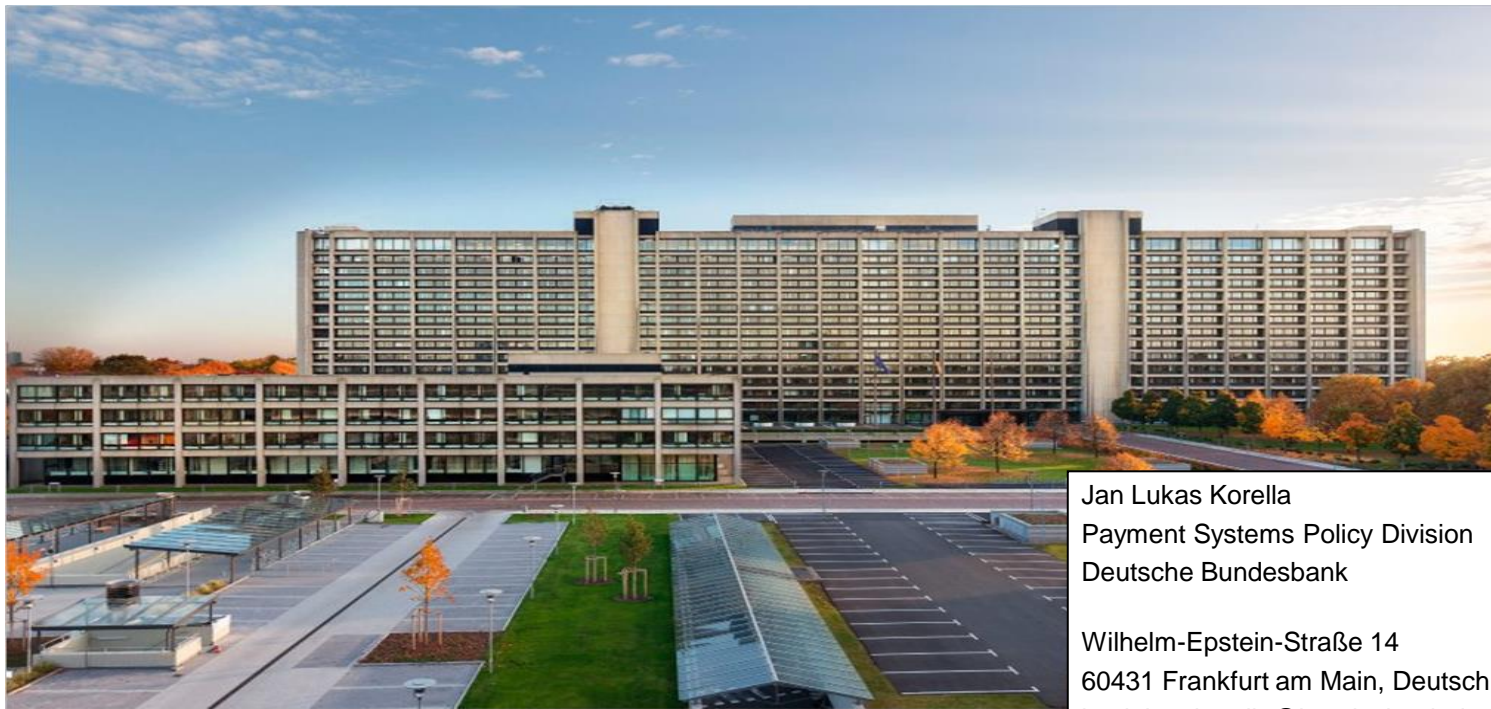
- Process towards a **world of payments without cash?**
- **Tighter oversight** for non-bank payment services in China
  - Payment markets in China and Germany getting **more similar?**

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**Thank you very much for your attention!**



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