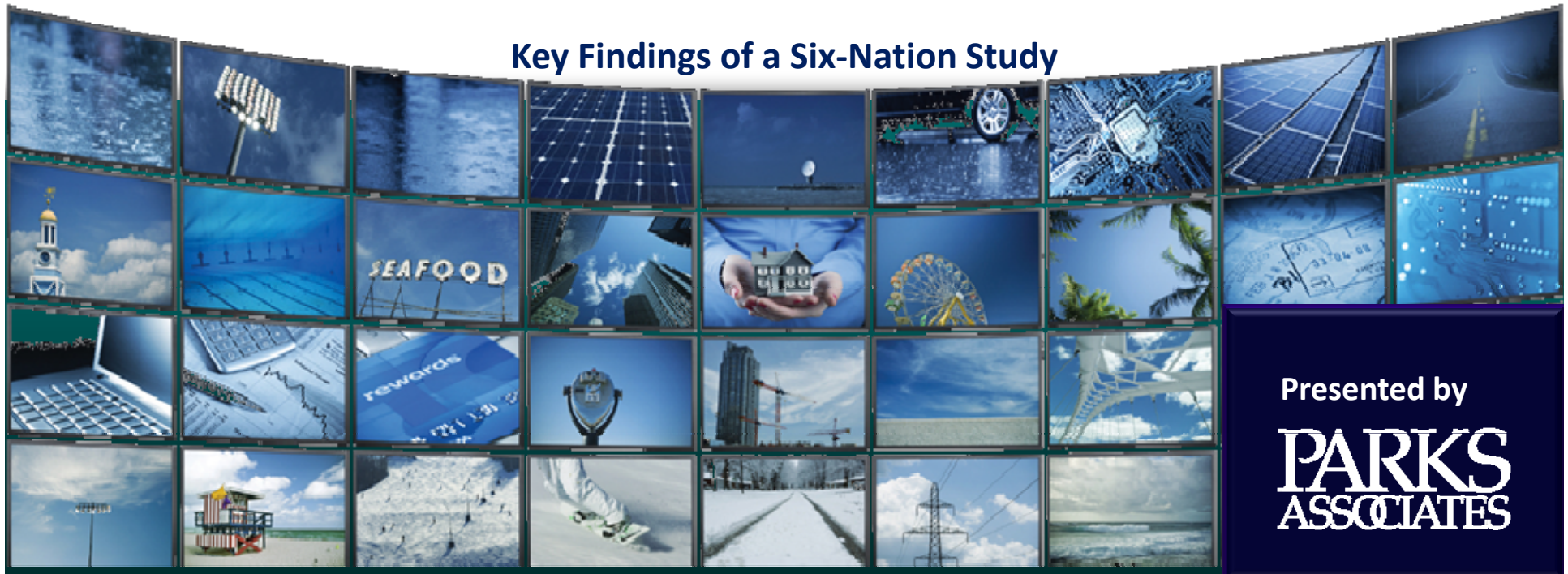


Global Consumer Research on Femtocells

Key Findings of a Six-Nation Study



Presented by

**PARKS
ASSOCIATES**

Background on the Global Consumer Study

- The Femto Forum commissioned Parks Associates to conduct this custom consumer research in six nations: the U.S., the U.K., Germany, Spain, China, and Japan.
- U.S. findings were presented in Femtocells World Summit (June) and published in white paper U.S. Consumer Attitudes on In-Home Mobile Services and Femtocells available at Femto Forum web site.
- The study aims to find out global consumer interest in femtocells, perceptions of the technology's benefits, and how femtocells may help mobile carriers improve service experience for subscribers.
- The U.S. survey sampled 1,100 consumers, the other five nation surveys each sampled 1,000 consumers. All respondents were heads of broadband households, 18 or over, had an equal or greater share in household decisions, and used a mobile phone service.
- Each nation's sample represents that nation's broadband population on age, gender and income; Each nation's survey results have a 95% confidence with a +/- 3% margin of error.
- The U.S. survey was fielded between 04/30/10 and 05/12/10 and all other nations' surveys were fielded between 10/15/10 and 10/30/10.

Parks Associates: Research and Analysis for Digital Living Technologies

Specialists in Digital Living

Experts in the technology products and services used by consumers in their homes

Over 20 years experience

Strong track record for analyzing markets and trends since 1986

Both consumer and industry research

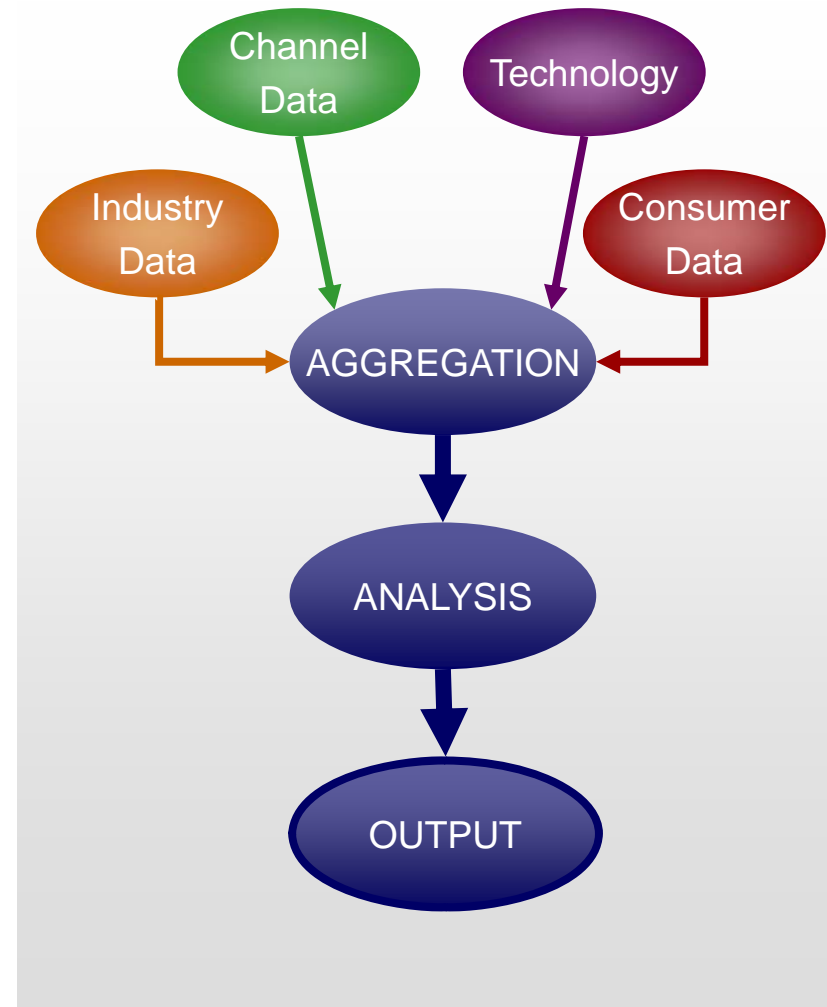
Industry perspective and consumer feedback for an accurate look at the marketplace

Syndicated and custom research

Options to address all of your information needs

Experience in Global Research

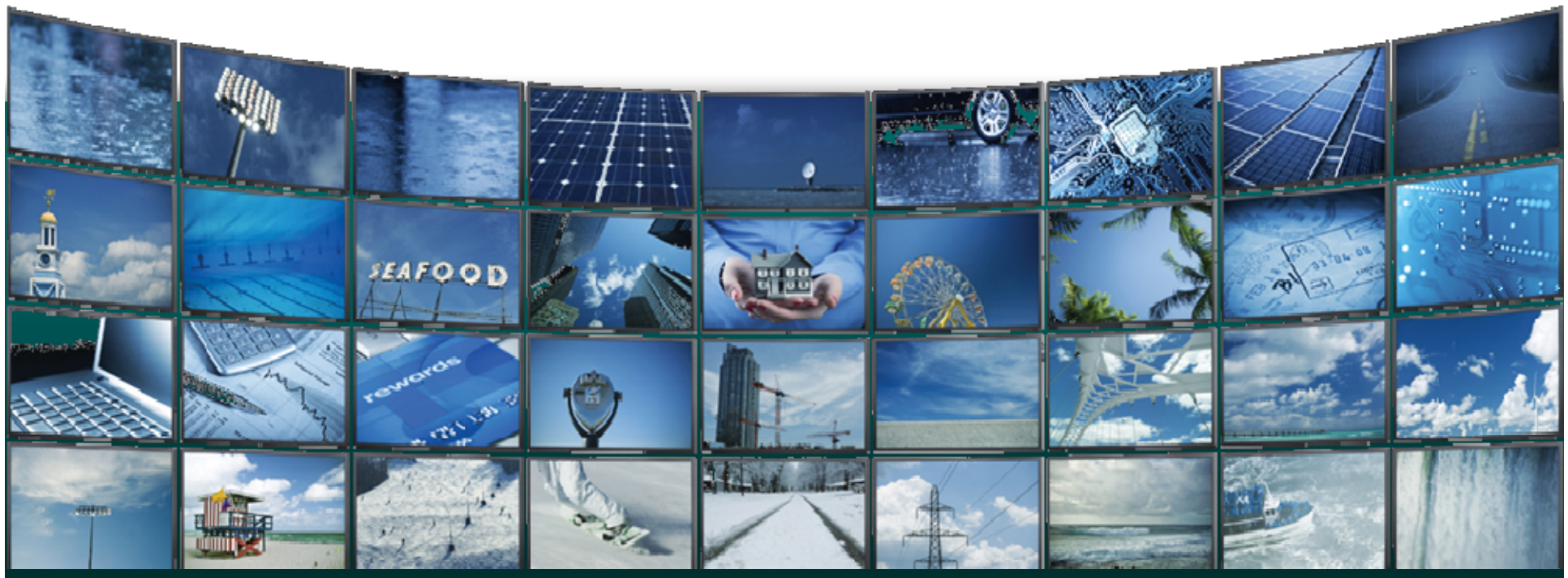
Research covers the global market for Digital Living products and services



Key Findings of the Global Study

- **Voice quality is the key driver of global consumer satisfaction of mobile services.**
- **Churn is likewise driven by problems with voice quality and dropped calls and femtocells can reduce subscriber churn.**
- **Worldwide, consumers find femtocells appealing and their interest is mainly driven by their desire to improve in-home coverage.**
- **Femtocells offer other business benefits for carriers.**
- **While femtocells' appeals and benefits are global, country-level differences do exist.**

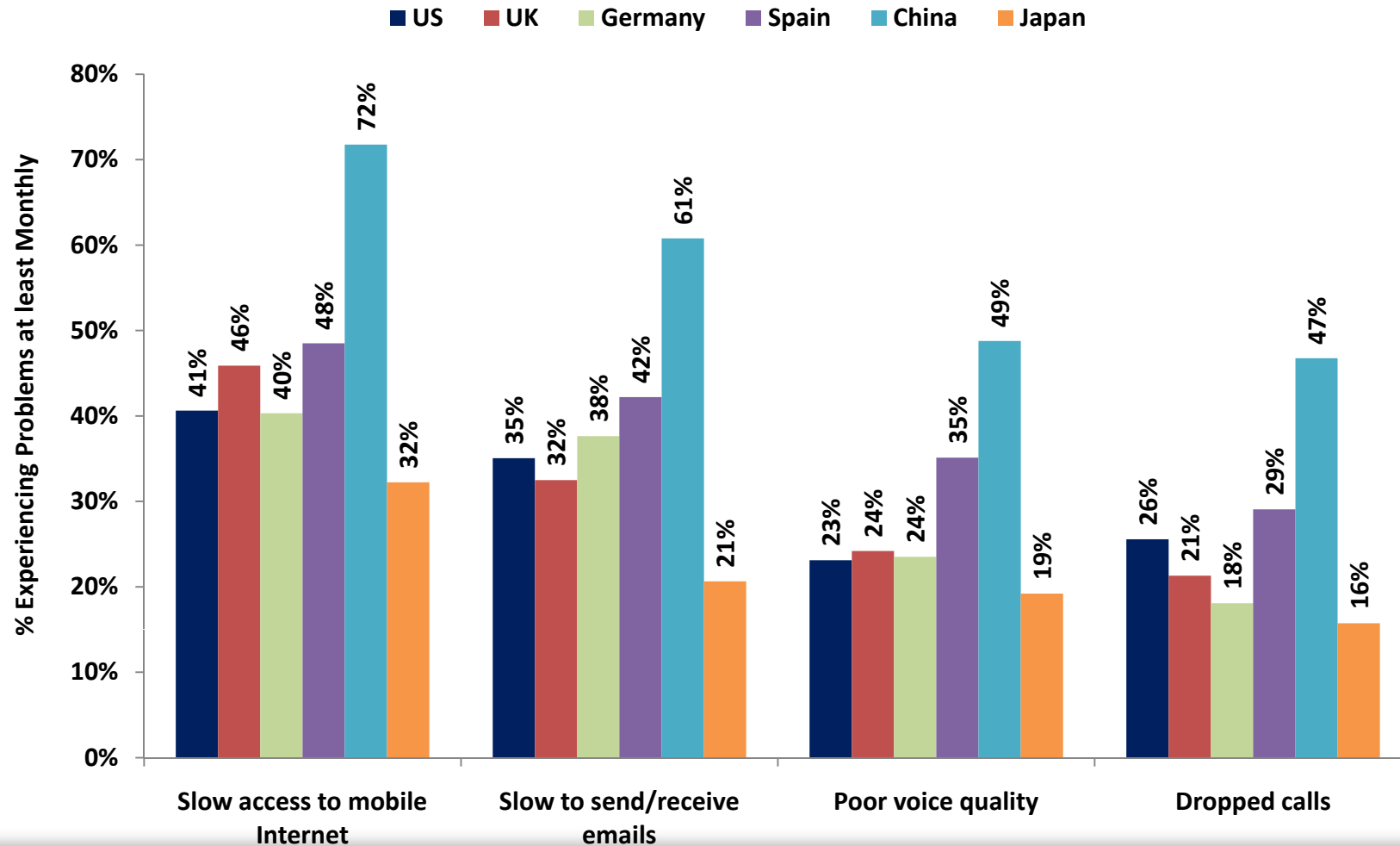
Consumer Perception of Their In-Home Mobile Experience



Mobile Phone/Service Problems

Problems with Mobile Service

Q3015. "How often do you experience these problems with your mobile phone while at home?"
(Among all Broadband HHs with Mobile Phone, with Specified Capability)



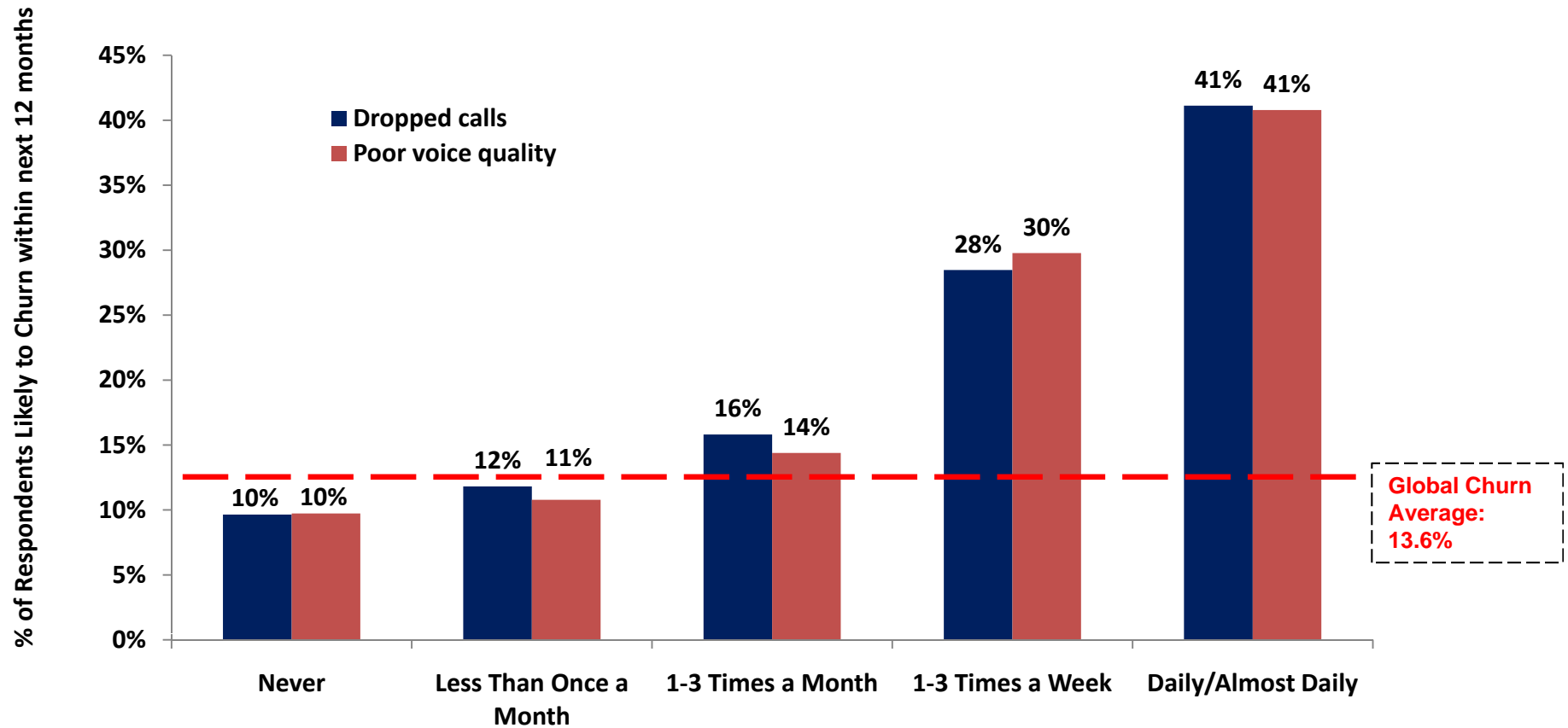
Source: Femto Forum Six-Country Study

Sample base: 6,100

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Call Quality Problems Drive Churn

Churn vs. Call Quality Problems

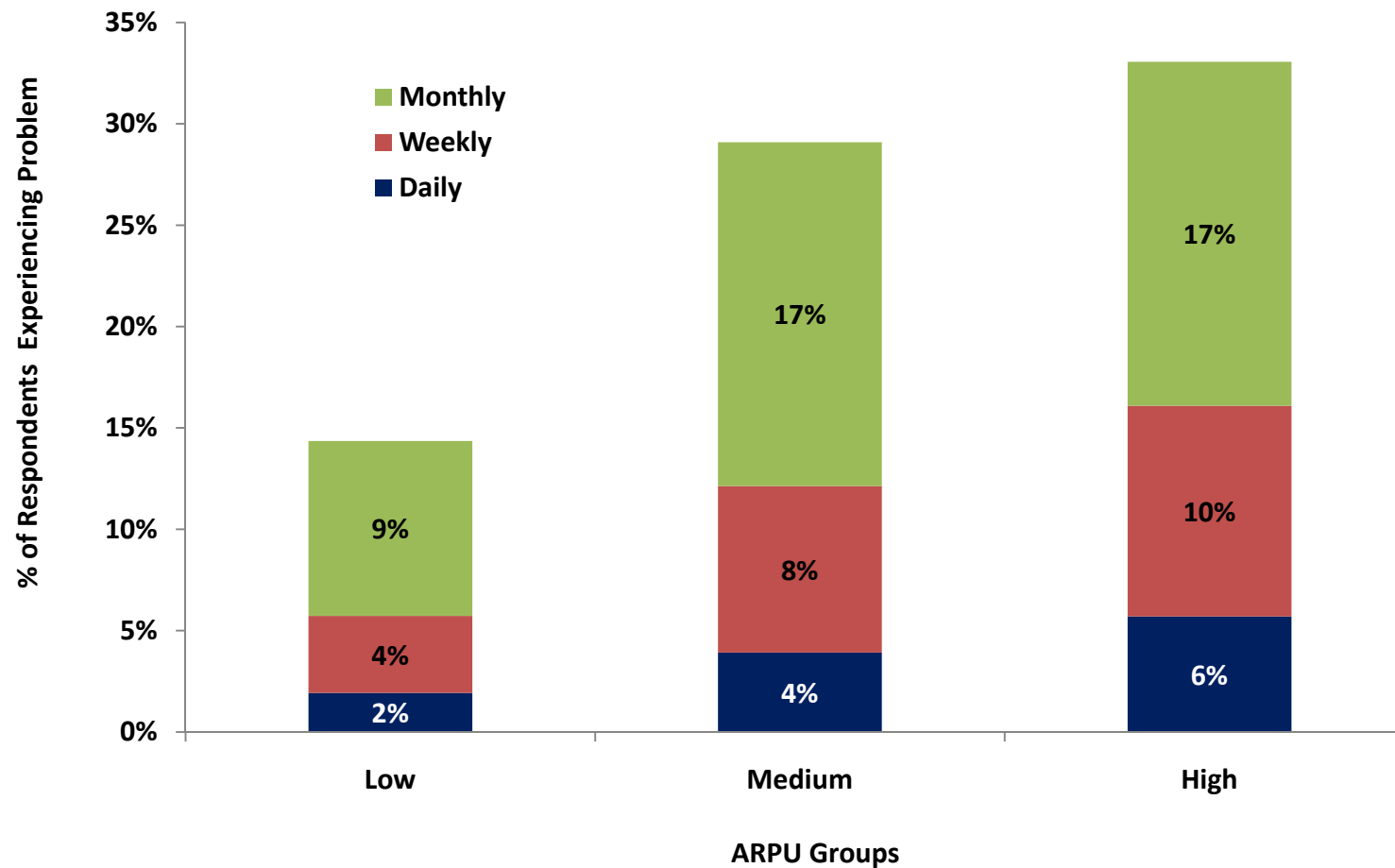


How often do you experience these problems with your mobile phone while at home?

High ARPU Consumers Experience the Most Service Problems

Dropped Calls vs. ARPU

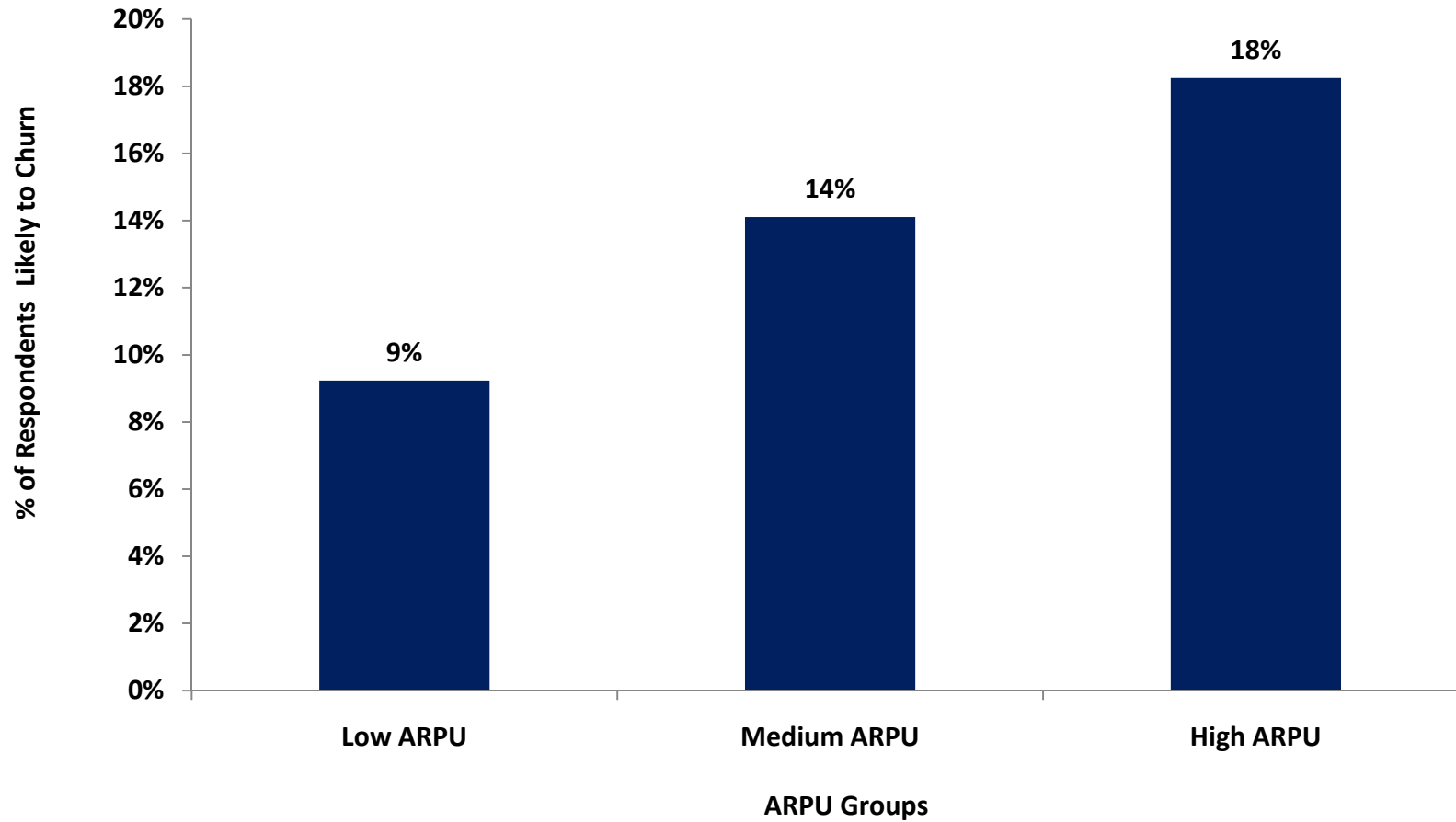
"Q3015. How often do you experience these problems with your mobile phone while at home?"



High ARPU Consumers are the Most Likely to Churn

Likelihood of Churning vs. ARPU

"Q3035.How likely are you to switch to a new mobile phone provider within the next 12 months?"



Source: Femto Forum Six-Country Study

Sample base: 6,100

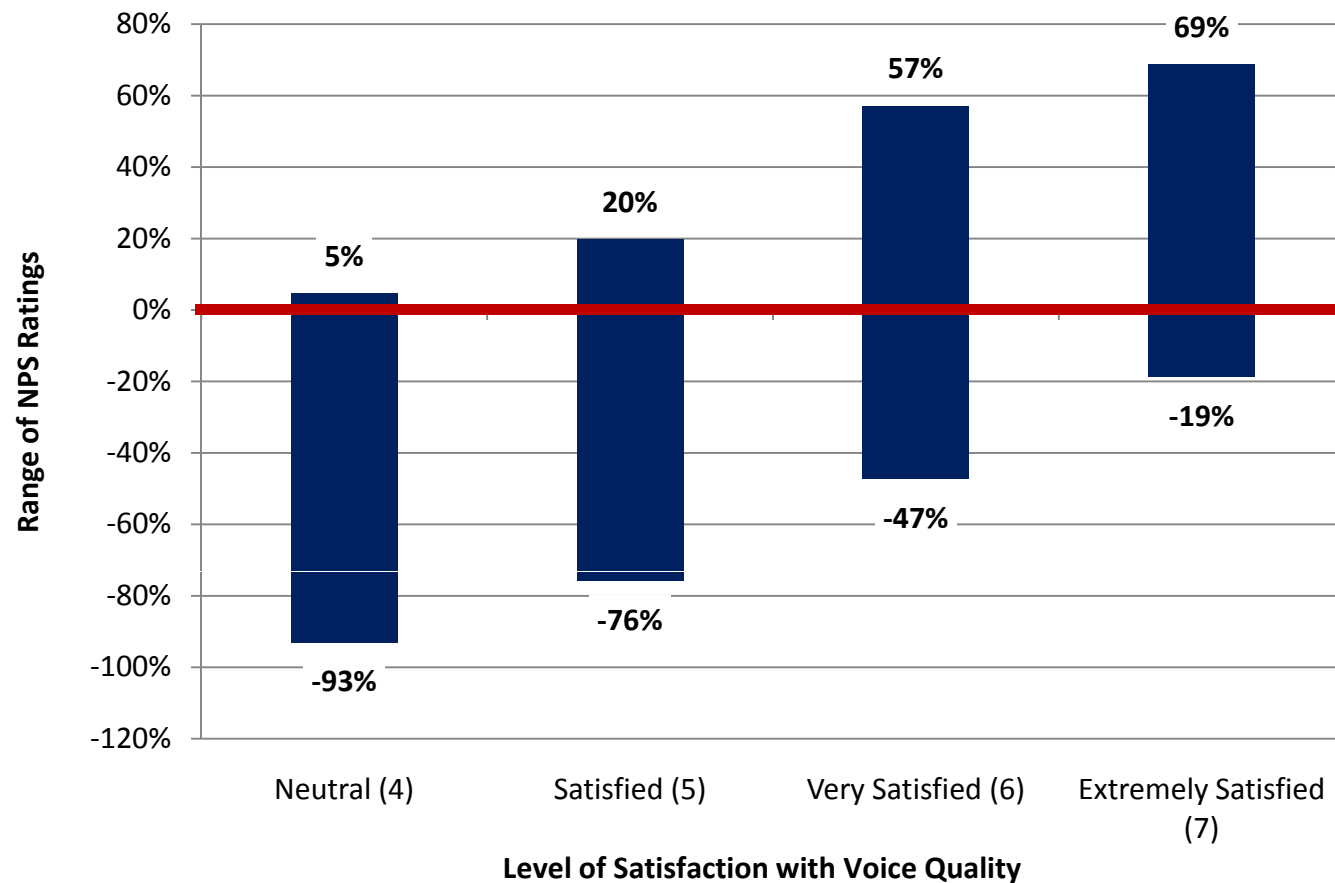
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Voice Quality Drives NPS¹ and Satisfaction

Satisfaction with voice quality and price are the key factors influencing NPS ratings and of the two, the former is the most important. Only subscribers that are satisfied with their voice quality are likely to give their provider a positive NPS rating and even then only when they are relatively satisfied with their price.

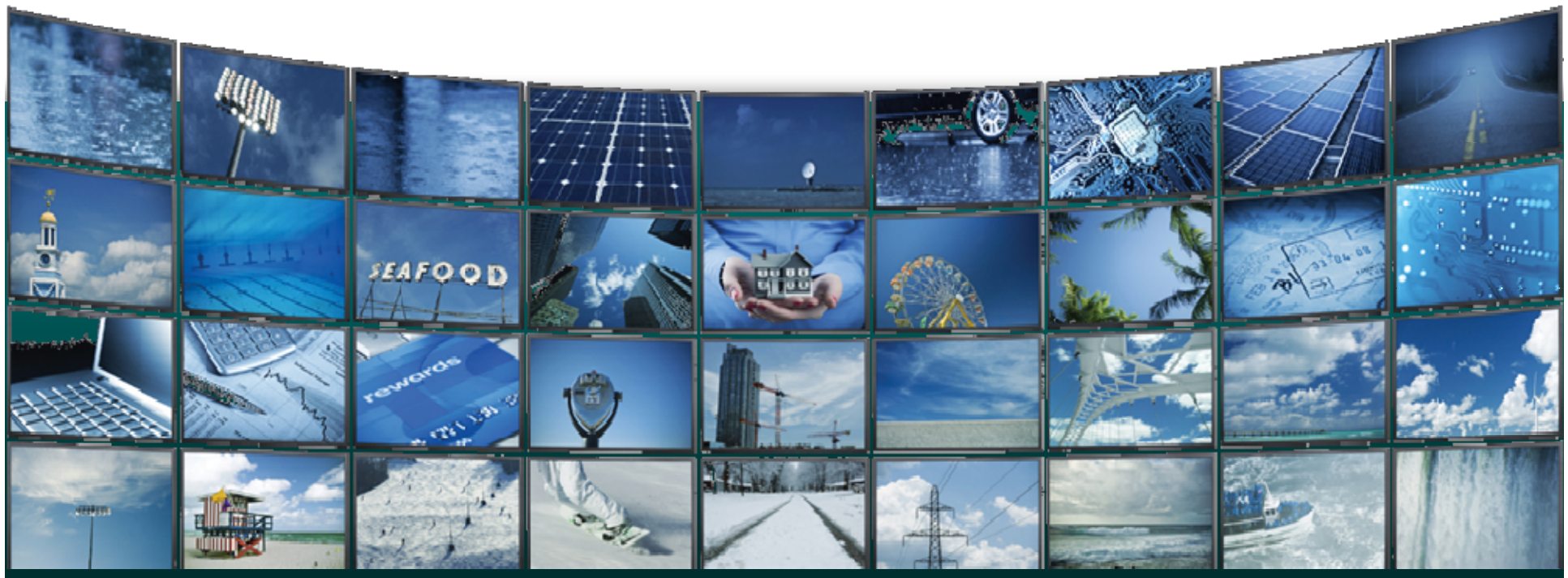
NPS Ratings and Satisfaction with Voice Quality

"Q3030.How likely are you to recommend your current mobile service to a friend or family member?"



¹ NPS ratings are a commonly used measure of consumer satisfaction of services. The higher the percentage, the more likely consumers are satisfied.

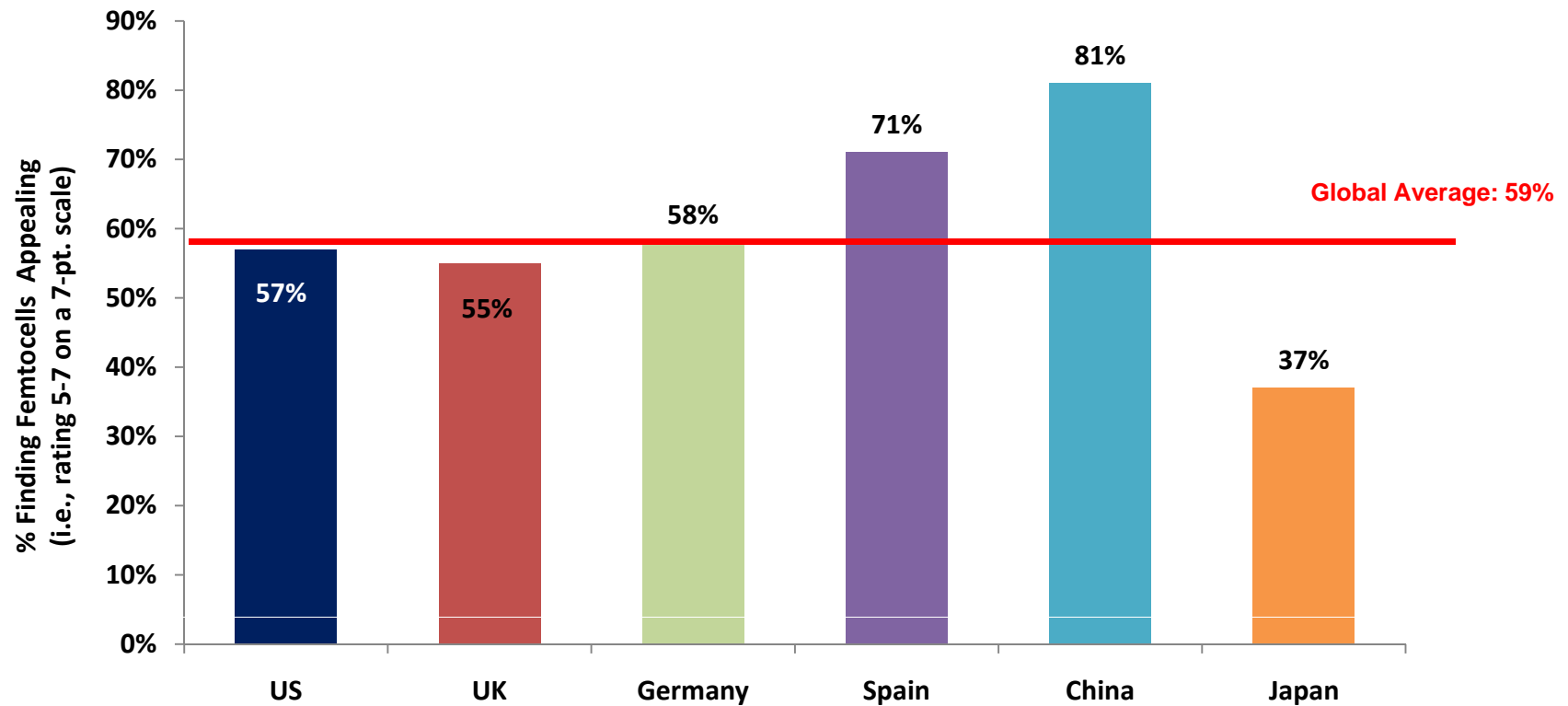
Femtocell Benefits to Consumers and Interest Drivers



Femtocell Appeal Varies by Market

Appeal of Femtocells (Q3/10)

Q4015. "How appealing is this product to you?"
(Among all Broadband HHs with Mobile Phone)



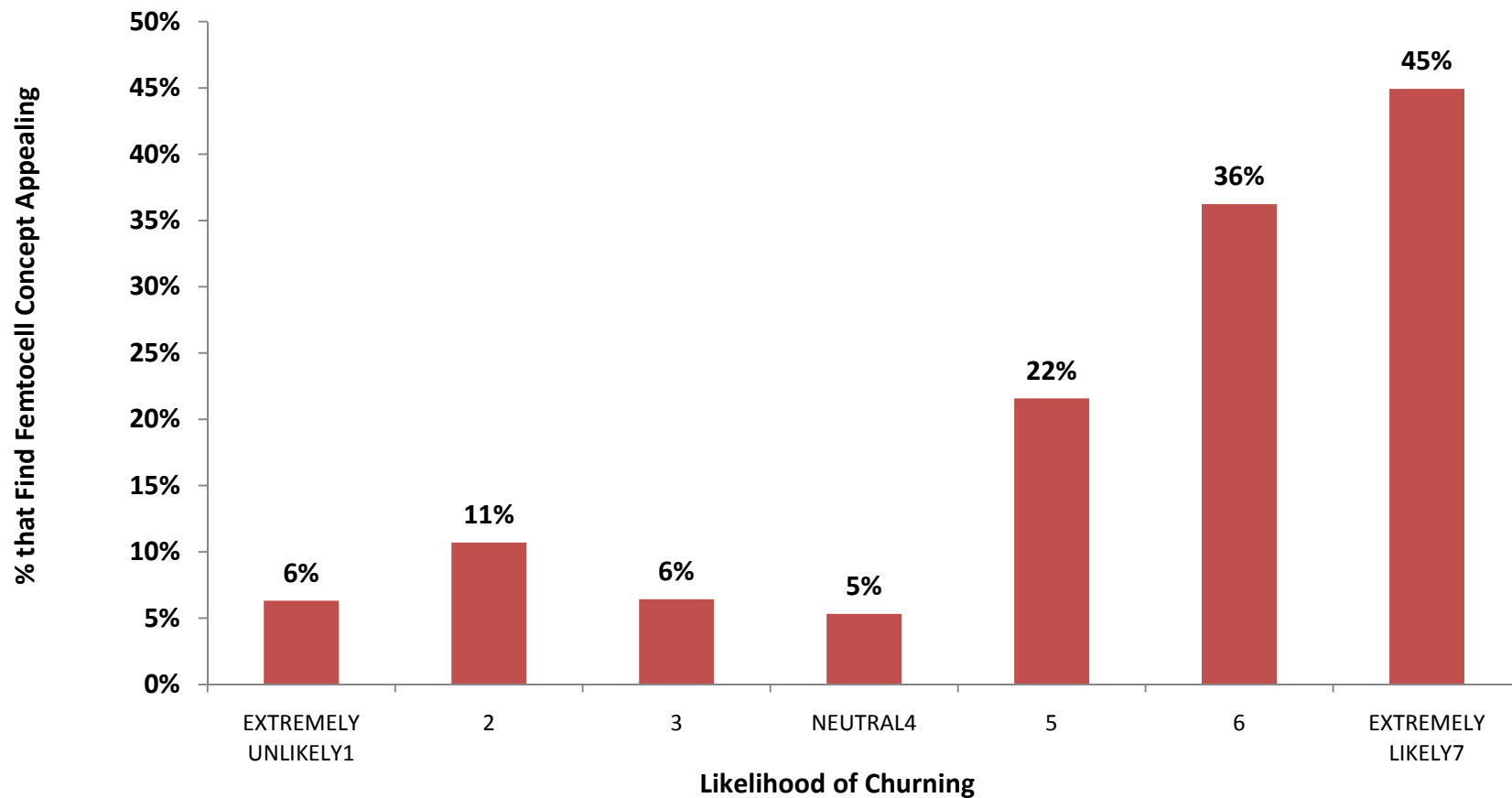
Femtocell Interest Drivers

Drivers	Global	U.S.	U.K.	Germany	Spain	China	Japan
Top Driver	Better In-Home Coverage/ Signal Strength	Better In-Home Coverage/ Signal Strength	Better In-Home Coverage/ Signal Strength	Better In-Home Coverage/ Signal Strength	Better In-Home Coverage/ Signal Strength	Better In-Home Coverage/ Signal Strength	High Mobile Internet Speed
Second Driver	Enhanced Audio/Video Downloading/ Streaming Speed	Enhanced Audio/Video Downloading/ Streaming Speed	High Mobile Internet Speed	High Mobile Internet Speed	Enhanced Audio/Video Downloading/ Streaming Speed	Enhanced Audio/Video Downloading/ Streaming Speed	Better In-Home Coverage/ Signal Strength
Third Driver	Cheaper In-home Voice Calling/ Mobile Data Costs	Cheaper In-home Voice Calling/ Mobile Data Costs	Cheaper In-home Voice Calling/ Mobile Data Costs	Cheaper In-home Voice Calling/ Mobile Data Costs	Cheaper In-home Voice Calling/ Mobile Data Costs	Cheaper In-home Voice Calling/ Mobile Data Costs	Enhanced Audio/Video Downloading/ Streaming Speed

Femtocell Appeal to Customers at Greatest Churn Risk

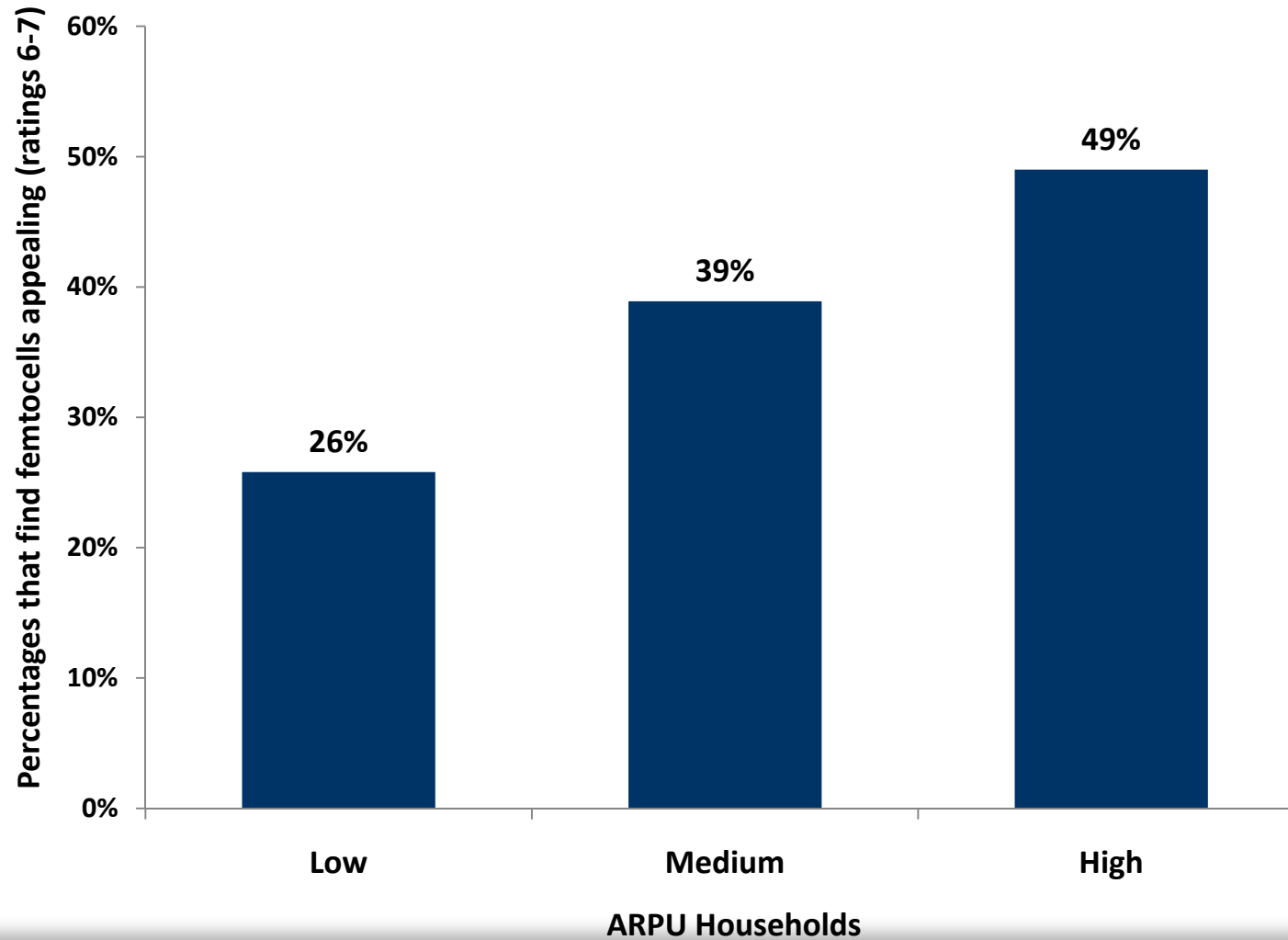
Femtocell Appeal and Churning

"Q4000. How interested are you in a solution that improves your in-home mobile service quality or experience?"



High ARPU Consumers Find Femtocells Appealing

High ARPU Households Find Femtocells More Appealing



Source: Femto Forum Six-Country Study

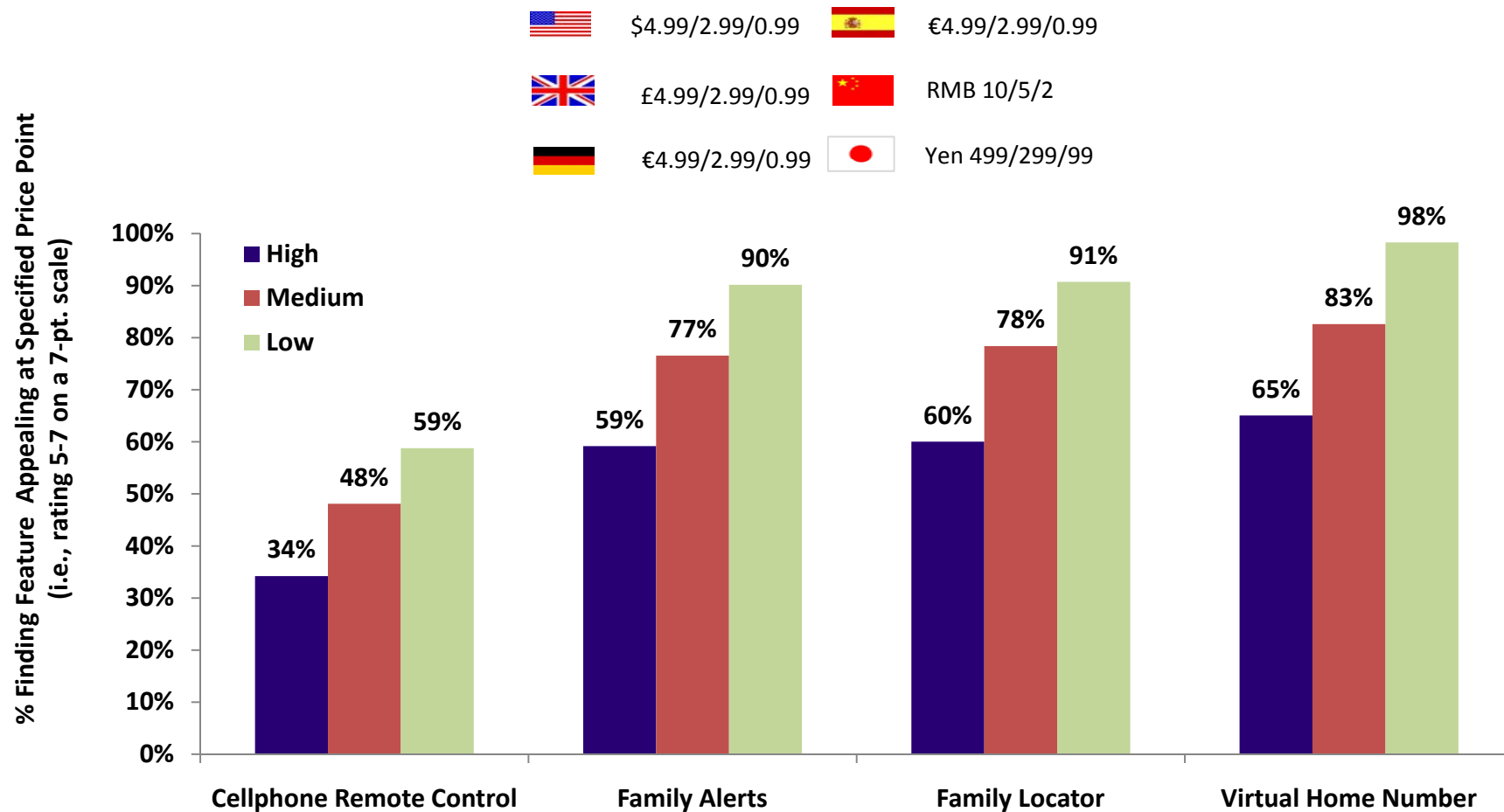
Sample base: 6,100

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Femtocell Fans Willing to Pay for Value-Added Services

Price Sensitivity of New Femtocell Services

Q4090-4092. "How likely are you to purchase your top-ranked service at these price points?"
 (Among Femtocell Fans Ranking Specified Service As Their Most Desired Service)



Source: Femto Forum Six-Country Study

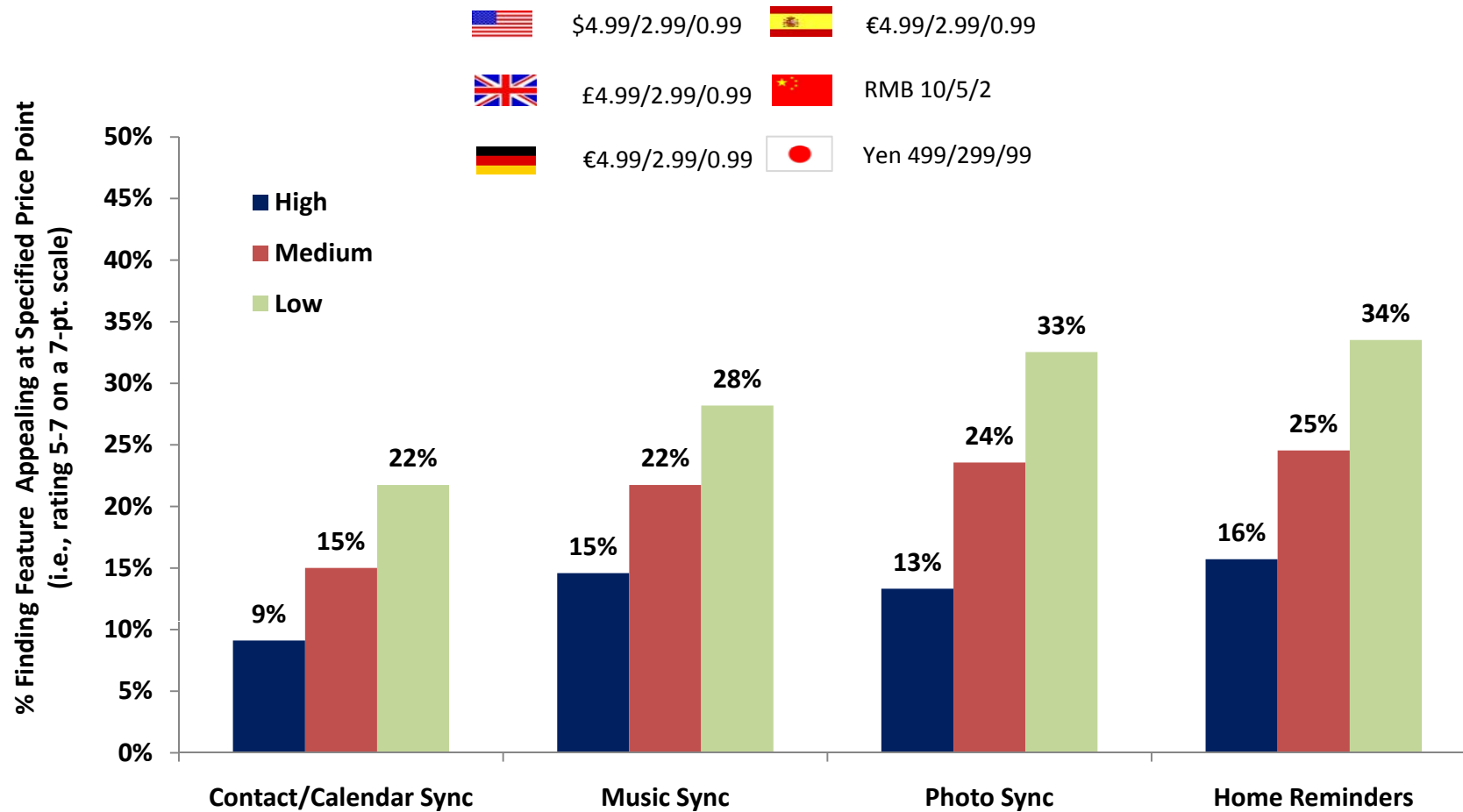
Sample base: 6,100

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Femtocell Fans Willing to Pay for Value-Added Services (continued)

Price Sensitivity of New Femtocell Services - Continued

Q4090-4092. "How likely are you to purchase your top-ranked service at these price points?"
 (Among Femtocell Fans Ranking Specified Service As Their Most Desired Service)



Source: Femto Forum Six-Country Study

Sample base: 6,100

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Femtocell Benefits for Carriers: Customer Acquisition, Retention and Family Consolidation

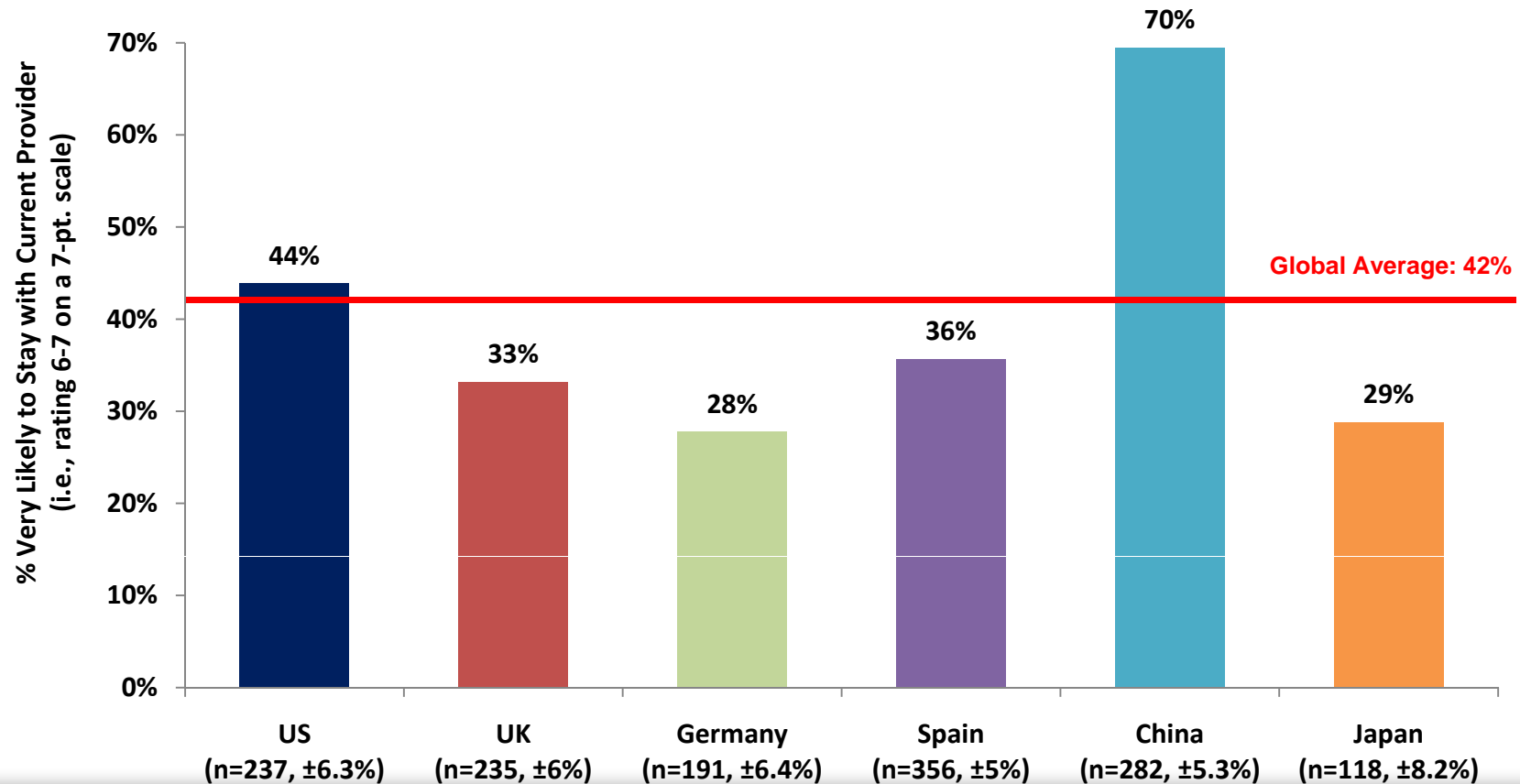


Femtocells Can Significantly Reduce Churn

Effect of Femtocells on Reducing Churn

Q4099. "You mentioned earlier that you are likely to switch mobile service providers within the next 12 months. If your current mobile service provider began offering a femtocell product with those benefits at a price that you like, how likely would you be to stay with it?"

(Among all Broadband HHs Likely to Switch Mobile Service Providers)



Source: Femto Forum Six-Country Study

Sample base: 6,100

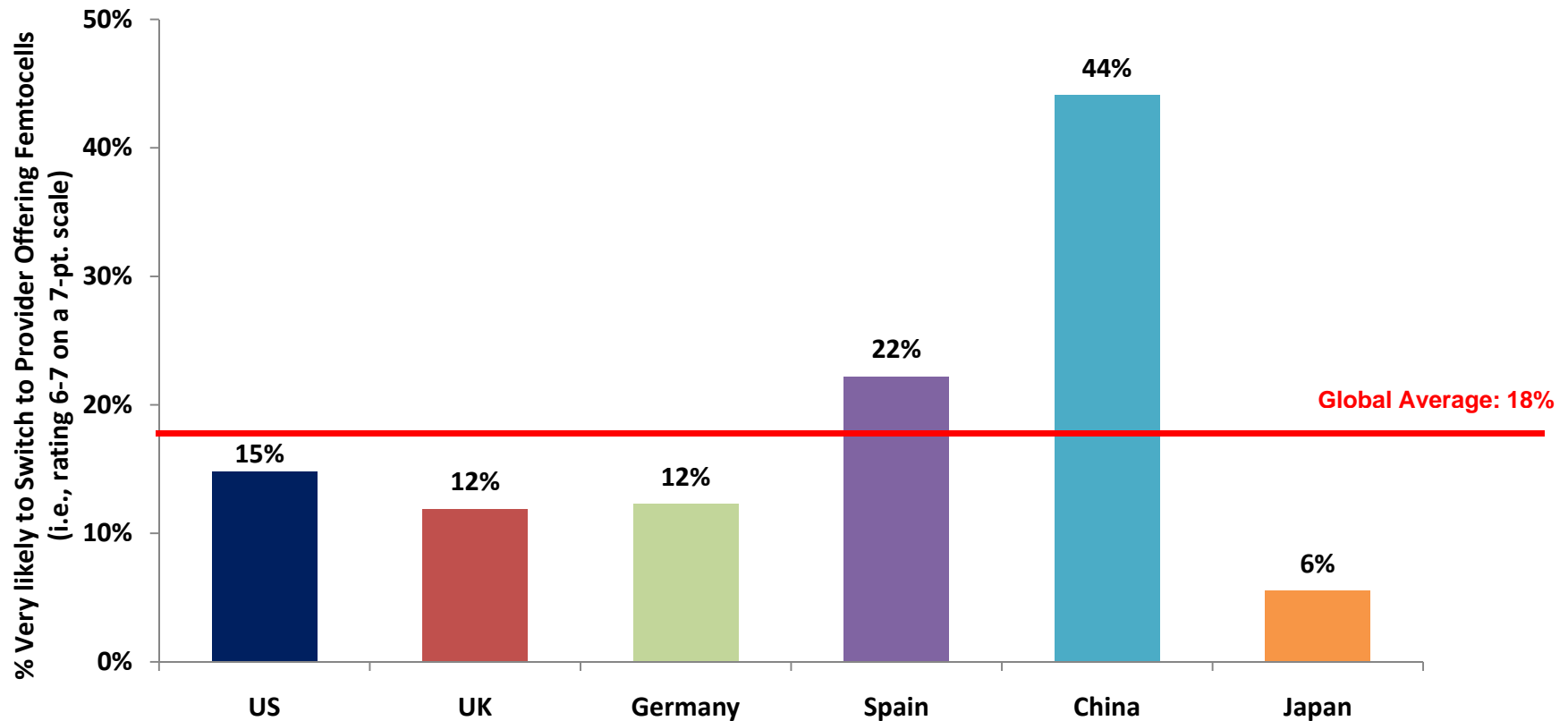
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Femtocells Can Attract New Customers

Likelihood to Churn to a Competing Carrier with Femtocell Offerings

Q4100. "If your current mobile service provider does not offer a femtocell product, how likely are you to switch to a provider that offers a femtocell solution?"

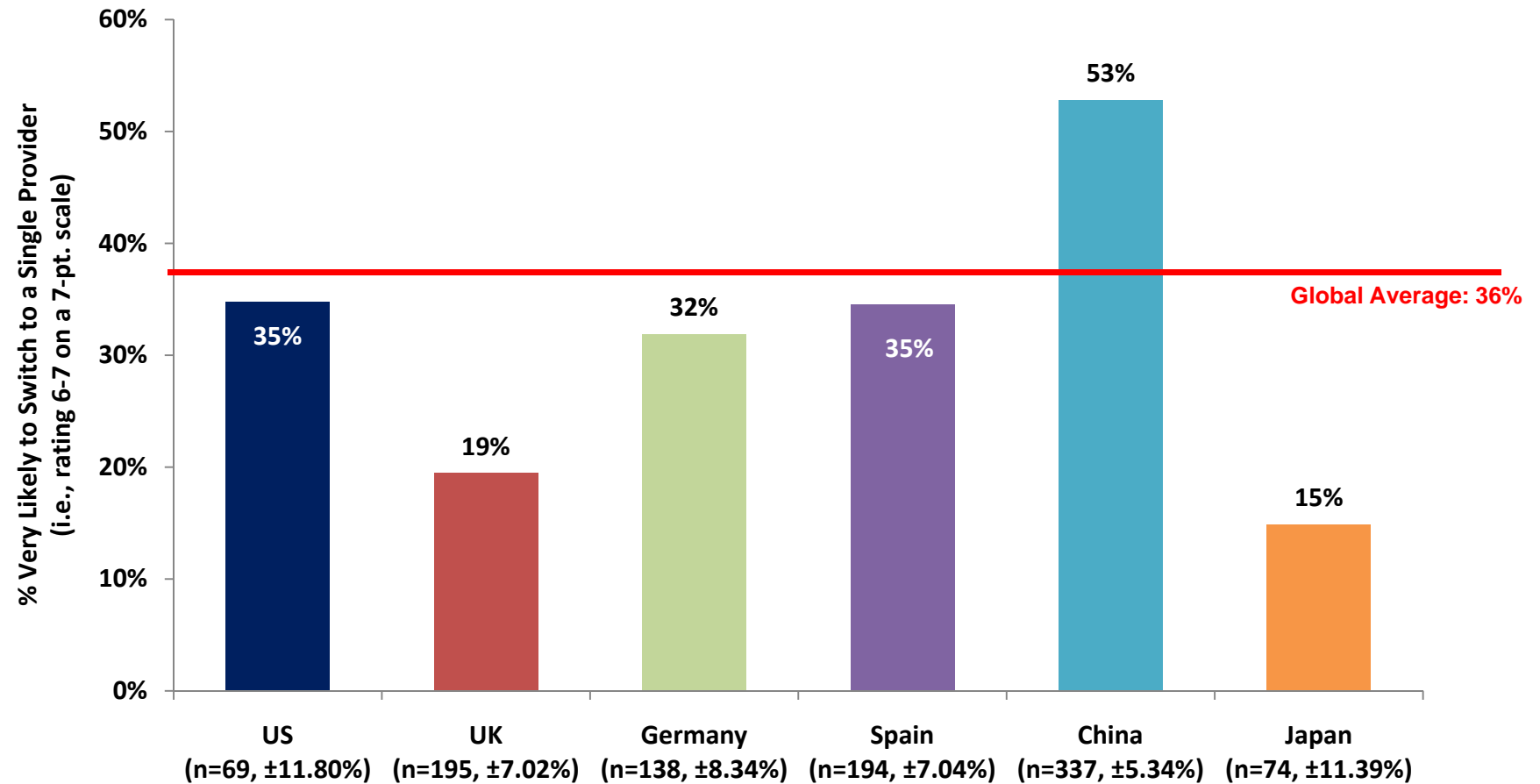
(Among all Broadband HHs with Mobile Phone)



Femtocells Can Attract New Household Members

Provider Consolidation for Femtocell

Q4105. "You said that your household uses multiple mobile service providers. If femtocells were offered by one of them, how likely would household members be to switch their service to this provider?"
(Among all Broadband HHs with Mobile Phone, Using Multiple Carriers)



Summary/Recap

- **Voice quality is the key driver of global consumer satisfaction of mobile services.**
- **Churn is likewise driven by voice quality problems; femtocells can reduce subscriber churn**
- **High ARPU subscribers are more likely to experience poor voice quality, dropped calls and to churn as a result.**
 - Up to 42% of service churns could be prevented by femtocells
- **Global consumers find Femtocells appealing and their interest is mainly driven by their desire to improve in-home coverage.**
- **Femtocells offer other business benefits for carriers.**
 - Femtocells also increase carriers' market competitiveness—18% of consumers could be persuaded to switch carriers if femtocells are offered.
 - Up to 36% of consumers with multiple carrier accounts might choose to consolidate their service account with a single carrier if femtocells are offered.
- **While Femtocell's appeals and benefits are global, country-level differences do exist.**
 - Chinese broadband consumers show the strongest appetite for femtocells.
 - Japanese consumers found femtocell's benefit of improving mobile Internet speed particularly appealing—a reasonable finding for a country renowned for mobile data services.
 - Spanish consumers are more willing to switch providers due to femtocell offerings.
 - Consumers from the U.S., U.K. and Germany prefer "Virtual Home Number," whereas consumers from China and Spain like "Family Locator."

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