

U.S. Auto Industry Chartbook

BBVA Research USA

Houston, TX

August 2016

Key Messages

- In July, auto sales reached their highest levels since Oct. 2015
- Demand continues to be biased towards light-trucks and away from cars
- The recent upward trend in oil and gas prices has eased, which could incentivize more miles driven
- Auto lending remains robust; leasing remains an increasingly preferred form of financing, especially for luxury vehicles
- Auto industry faces ongoing emphasis on reducing vehicle emissions along with increasing fuel economy/affordability of EVs
- Long-term demand for vehicles will be affected by an aging population, technology and the increasing importance of the sharing economy

Disclaimer

This document and the information, opinions, estimates and recommendations expressed herein, have been prepared by Banco Bilbao Vizcaya Argentaria, S.A. (hereinafter called "BBVA") to provide its customers with general information regarding the date of issue of the report and are subject to changes without prior notice. BBVA is not liable for giving notice of such changes or for updating the contents hereof.

This document and its contents do not constitute an offer, invitation or solicitation to purchase or subscribe to any securities or other instruments, or to undertake or divest investments. Neither shall this document nor its contents form the basis of any contract, commitment or decision of any kind.

Investors who have access to this document should be aware that the securities, instruments or investments to which it refers may not be appropriate for them due to their specific investment goals, financial positions or risk profiles, as these have not been taken into account to prepare this report. Therefore, investors should make their own investment decisions considering the said circumstances and obtaining such specialized advice as may be necessary. The contents of this document is based upon information available to the public that has been obtained from sources considered to be reliable. However, such information has not been independently verified by BBVA and therefore no warranty, either express or implicit, is given regarding its accuracy, integrity or correctness. BBVA accepts no liability of any type for any direct or indirect losses arising from the use of the document or its contents. Investors should note that the past performance of securities or

instruments or the historical results of investments do not guarantee future performance.

The market prices of securities or instruments or the results of investments could fluctuate against the interests of investors. Investors should be aware that they could even face a loss of their investment. Transactions in futures, options and securities or high-yield securities can involve high risks and are not appropriate for every investor. Indeed, in the case of some investments, the potential losses may exceed the amount of initial investment and, in such circumstances, investors may be required to pay more money to support those losses. Thus, before undertaking any transaction with these instruments, investors should be aware of their operation, as well as the rights, liabilities and risks implied by the same and the underlying stocks. Investors should also be aware that secondary markets for the said instruments may be limited or even not exist.

BBVA or any of its affiliates, as well as their respective executives and employees, may have a position in any of the securities or instruments referred to, directly or indirectly, in this document, or in any other related thereto; they may trade for their own account or for third-party account in those securities, provide consulting or other services to the issuer of the aforementioned securities or instruments or to companies related thereto or to their shareholders, executives or employees, or may have interests or perform transactions in those securities or instruments or related investments before or after the publication of this report, to the extent permitted by the applicable law.

BBVA or any of its affiliates' salespeople,

traders, and other professionals may provide oral or written market commentary or trading strategies to its clients that reflect opinions that are contrary to the opinions expressed herein. Furthermore, BBVA or any of its affiliates' proprietary trading and investing businesses may make investment decisions that are inconsistent with the recommendations expressed herein. No part of this document may be (i) copied, photocopied or duplicated by any other form or means (ii) redistributed or (iii) quoted, without the prior written consent of BBVA. No part of this report may be copied, conveyed, distributed or furnished to any person or entity in any country (or persons or entities in the same) in which its distribution is prohibited by law. Failure to comply with these restrictions may breach the laws of the relevant jurisdiction.

In the United Kingdom, this document is directed only at persons who (i) have professional experience in matters relating to investments falling within article 19(5) of the financial services and markets act 2000 (financial promotion) order 2005 (as amended, the "financial promotion order"), (ii) are persons falling within article 49(2) (a) to (d) ("high net worth companies, unincorporated associations, etc.") Of the financial promotion order, or (iii) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of section 21 of the financial services and markets act 2000) may otherwise lawfully be communicated (all such persons together being referred to as "relevant persons"). This document is directed only at relevant persons and must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this document relates is available only to relevant persons and will be engaged in only with relevant persons.

The remuneration system concerning the analyst/s author/s of this report is based on multiple criteria, including the revenues obtained by BBVA and, indirectly, the results of BBVA Group in the fiscal year, which, in turn, include the results generated by the investment banking business; nevertheless, they do not receive any remuneration based on revenues from any specific transaction in investment banking.

BBVA is not a member of the FINRA and is not subject to the rules of disclosure affecting such members.

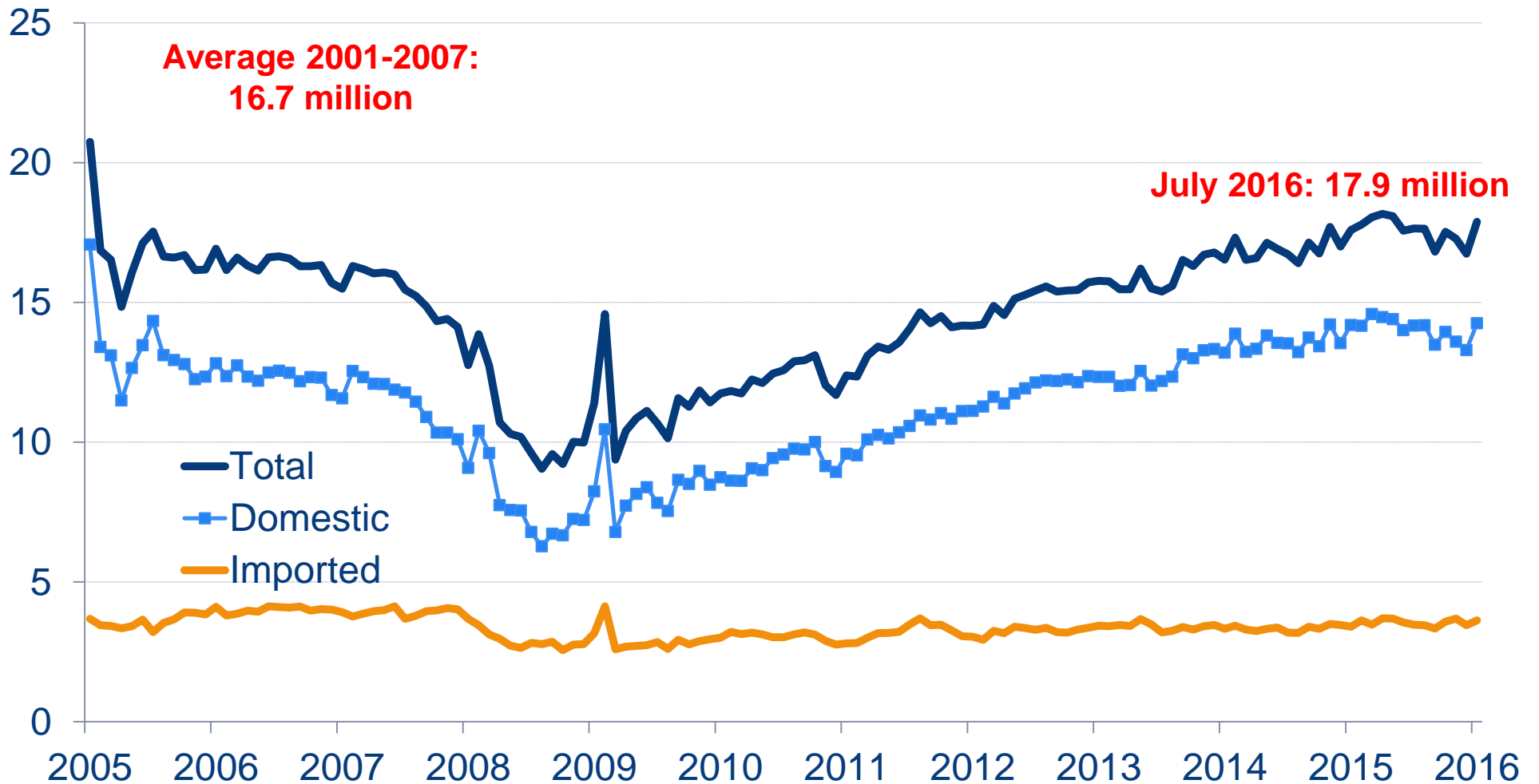
"BBVA is subject to the BBVA Group Code of Conduct for Security Market Operations which, among other regulations, includes rules to prevent and avoid conflicts of interests with the ratings given, including information barriers. The BBVA Group Code of Conduct for Security Market Operations is available for reference at the following web site: www.bbva.com / Corporate Governance". BBVA, S.A. is a bank supervised by the Bank of Spain and by Spain's Stock Exchange Commission (CNMV), registered with the Bank of Spain with number 0182.

1

Sales

Sales

U.S. Total light weight vehicle sales (SAAR*, million units)

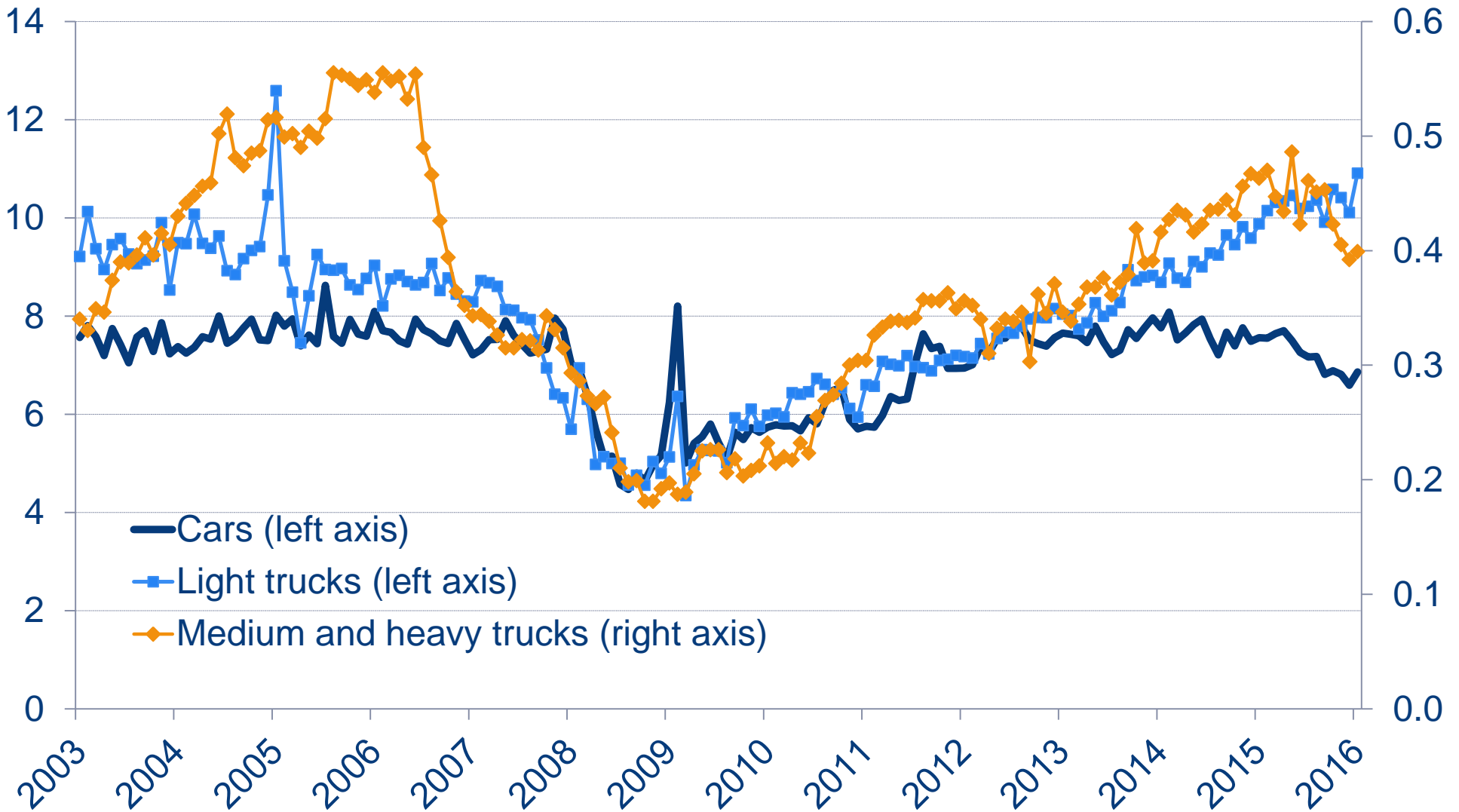


*SAAR = seasonally adjusted annual rate

Source: Haver Analytics

Sales

U.S. Total vehicle sales (SAAR, million units)



*SAAR = seasonally adjusted annual rate

Source: Haver Analytics

Sales

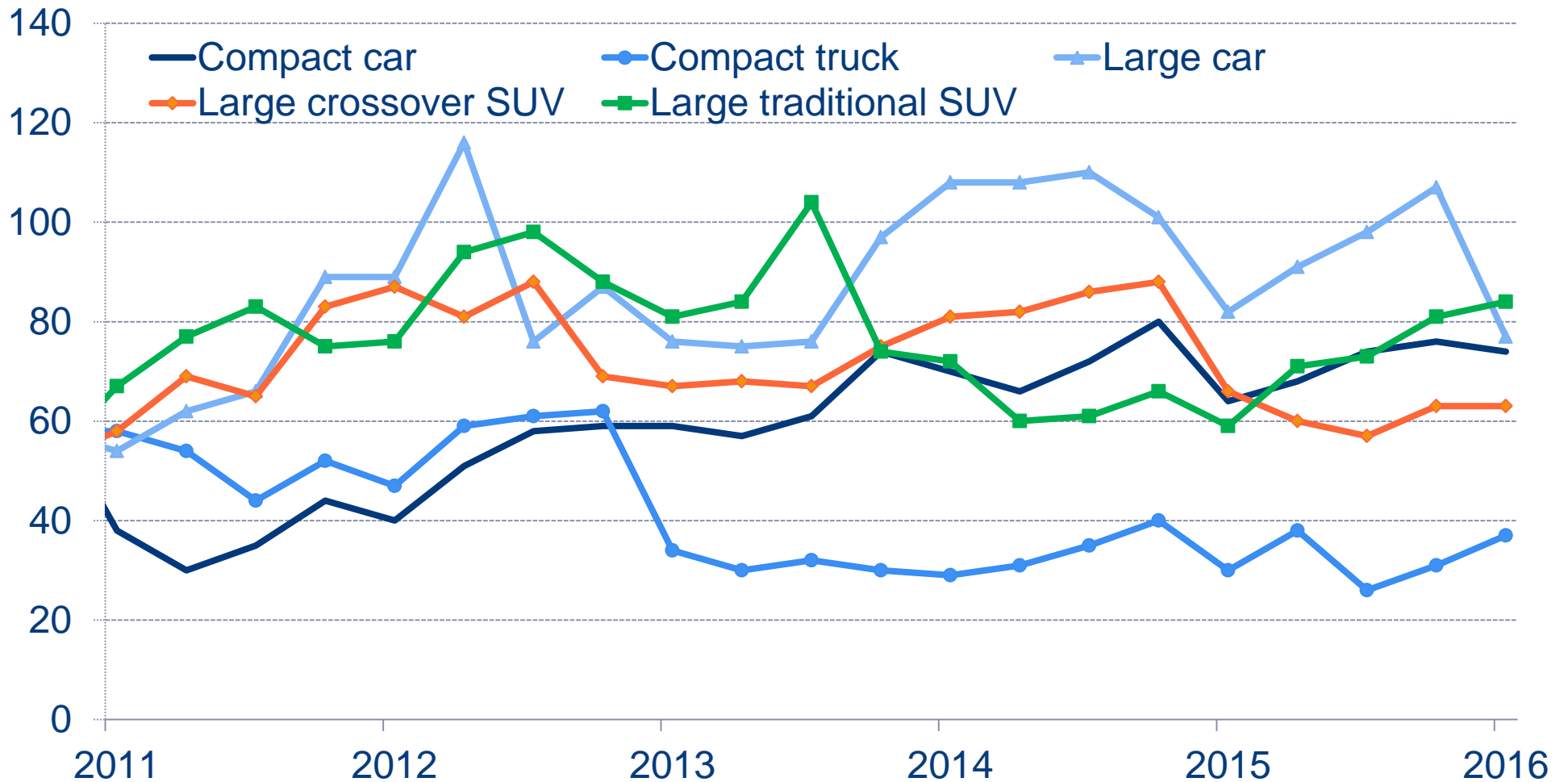
U.S. Light and heavy trucks minus cars (million units)



Source: Haver Analyticis

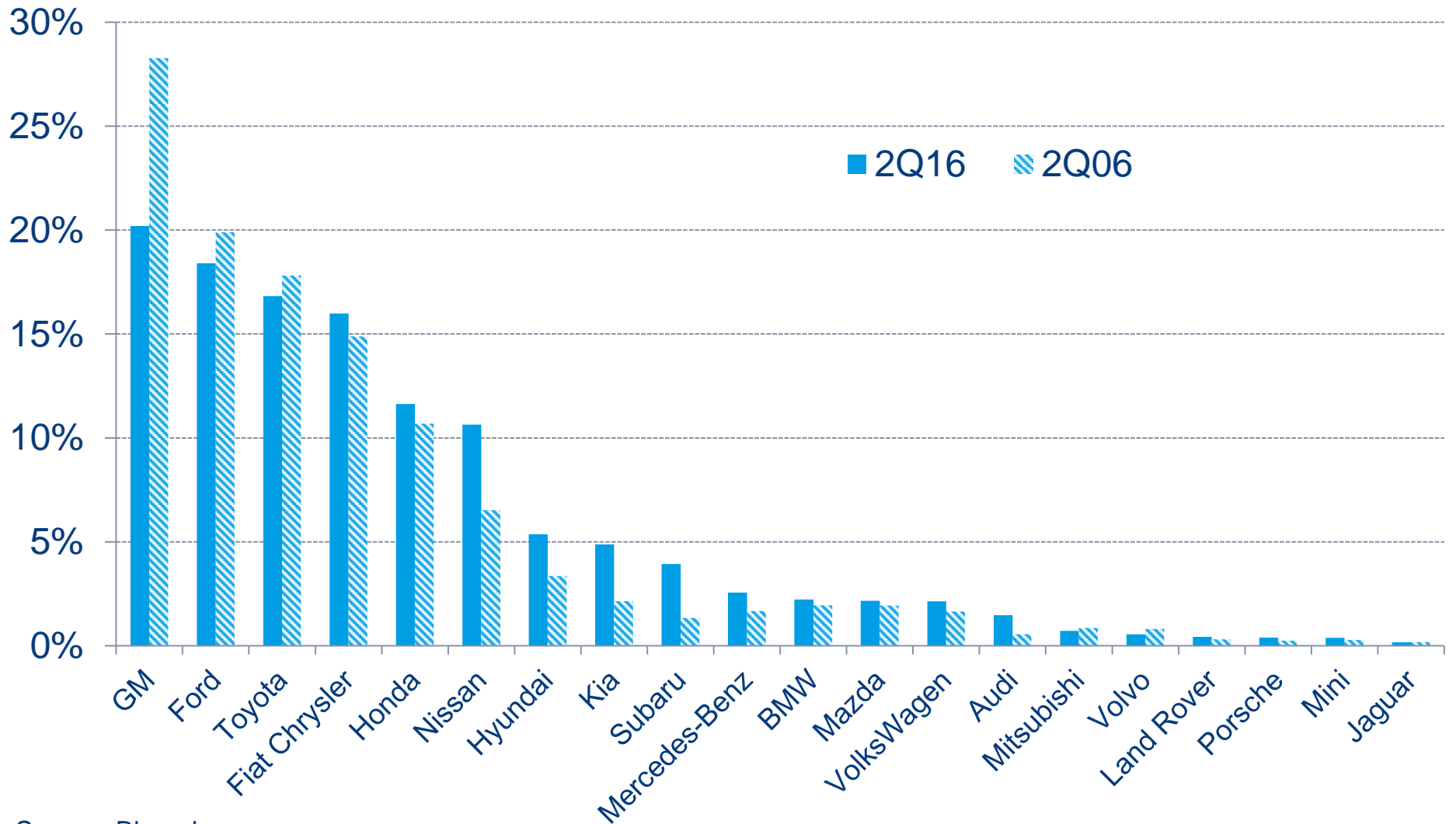
Sales

U.S. Vehicle days to turn (industry average)



Sales

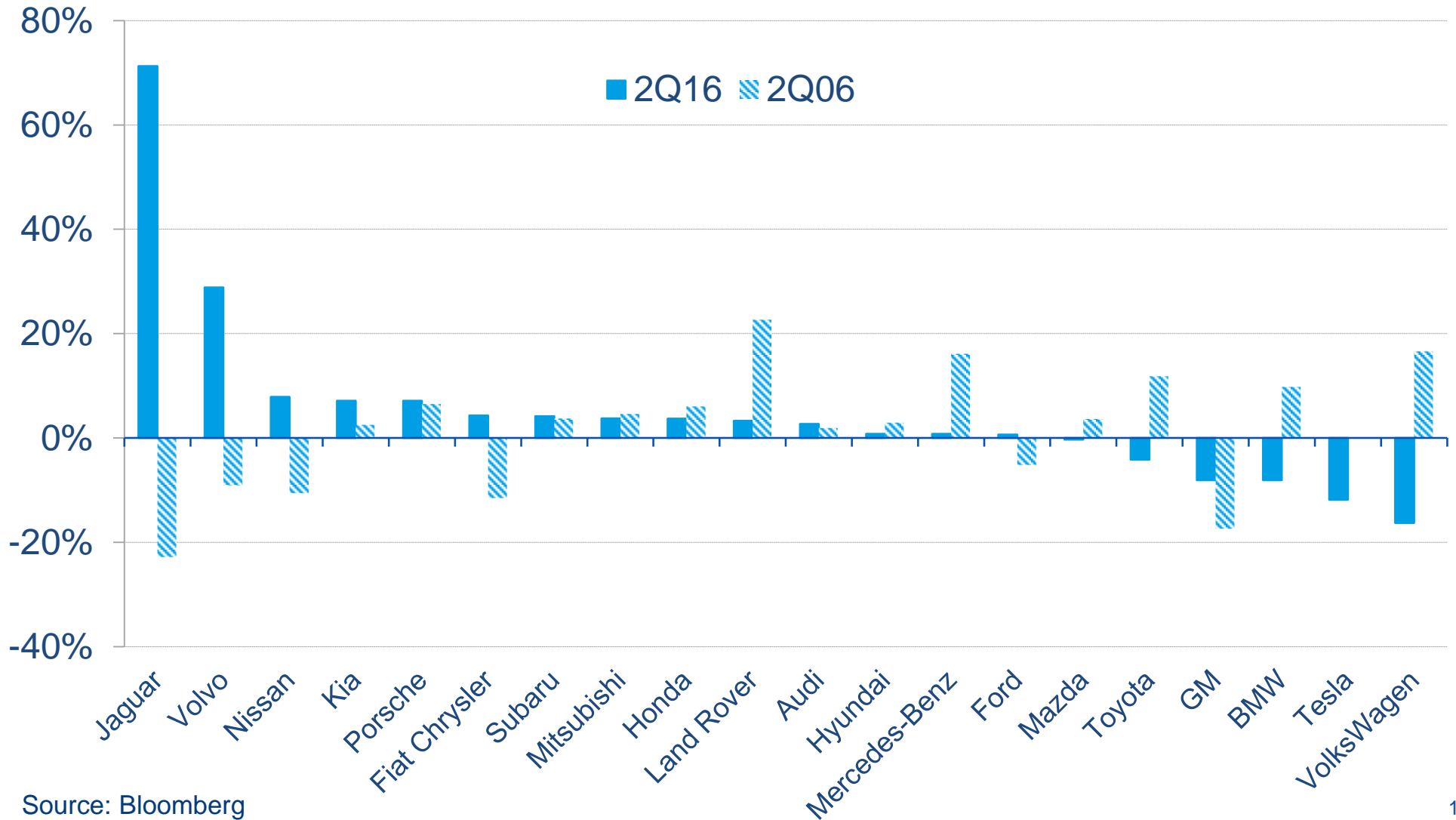
U.S. Market share by brand (%)



Source: Bloomberg

Sales

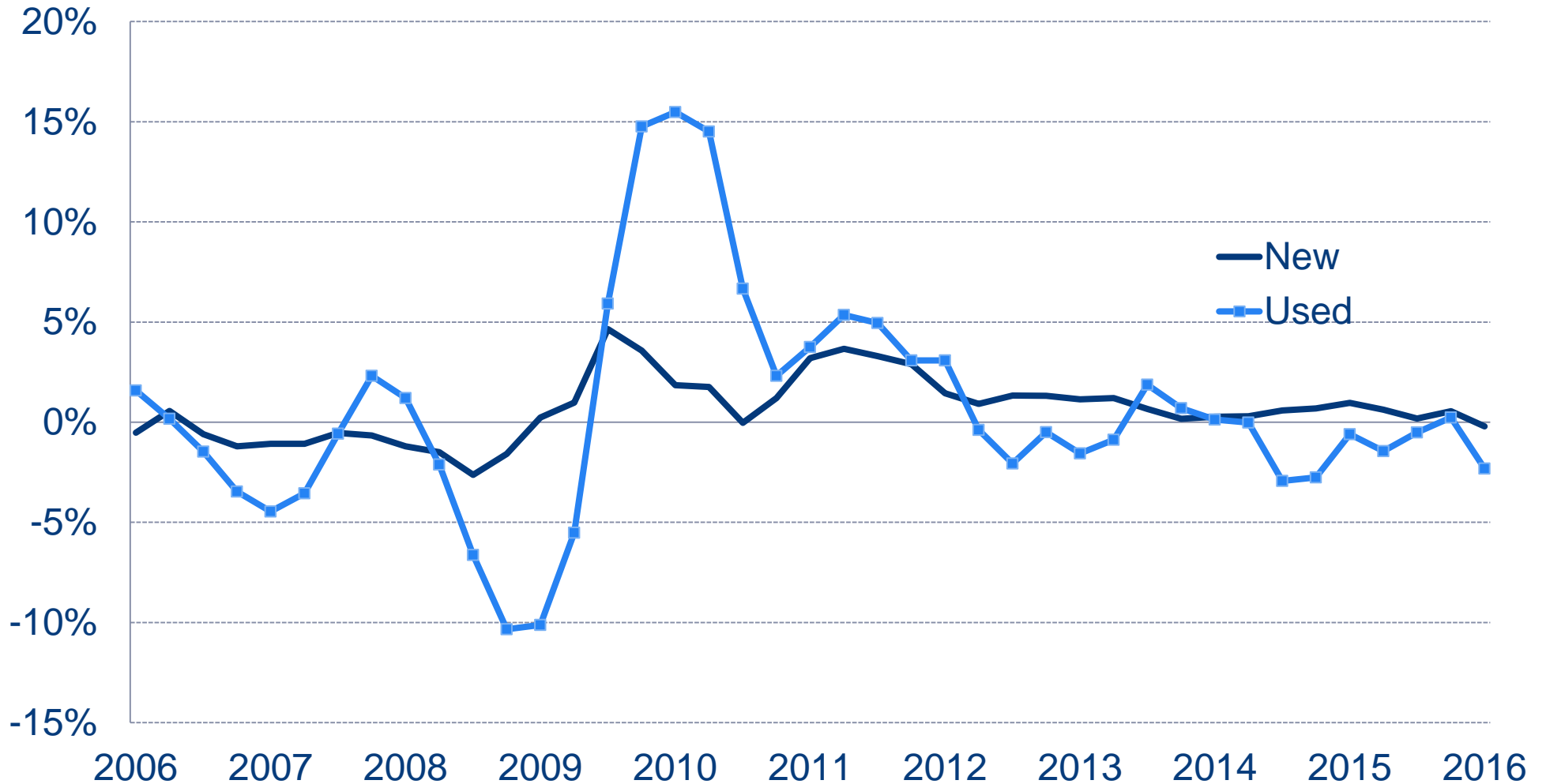
U.S. Quarterly unit sales (yoy % change)



Source: Bloomberg

Prices

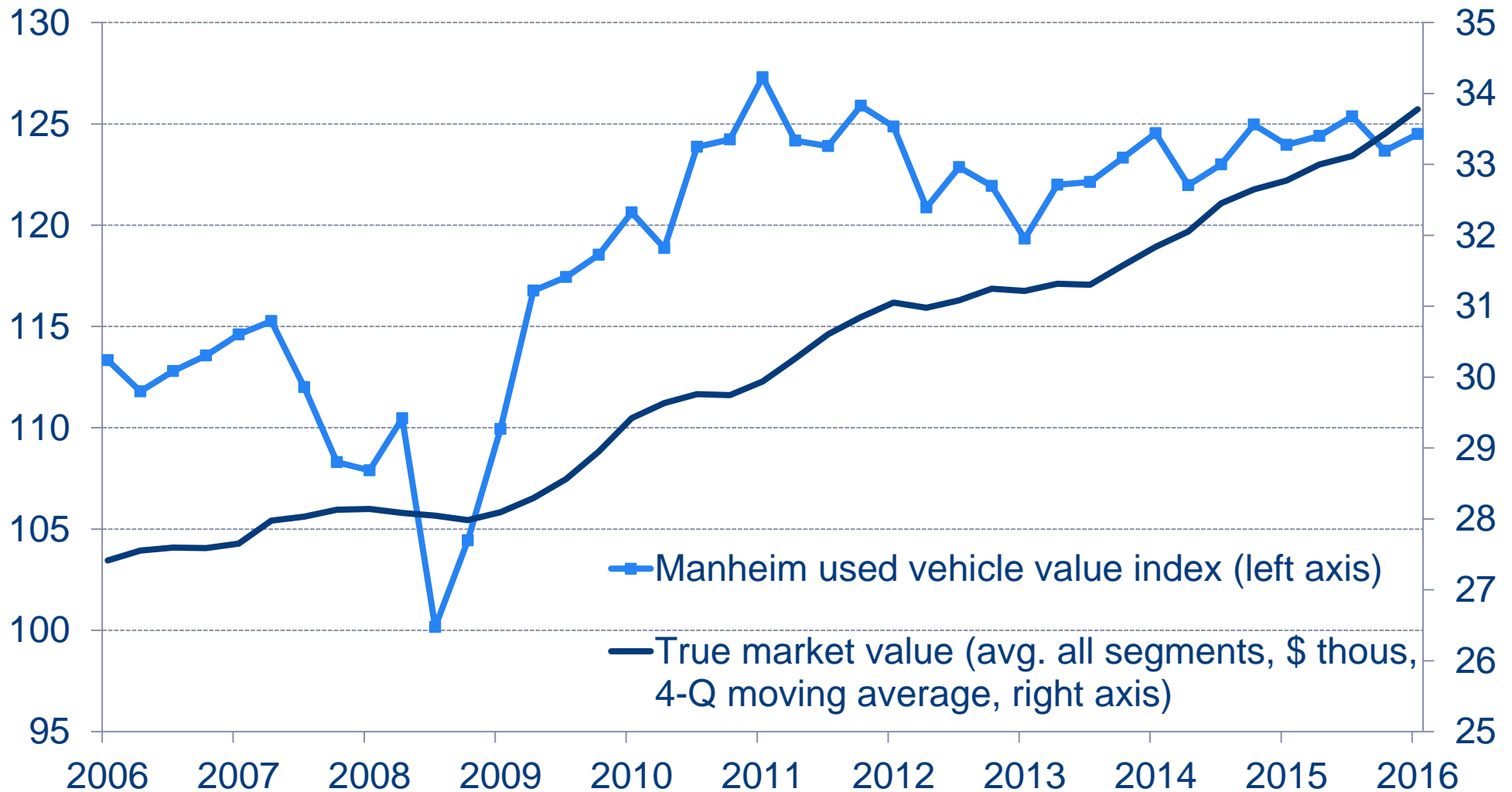
U.S. Consumer price index: cars and trucks (yoy % change)



Source: Haver Analytics

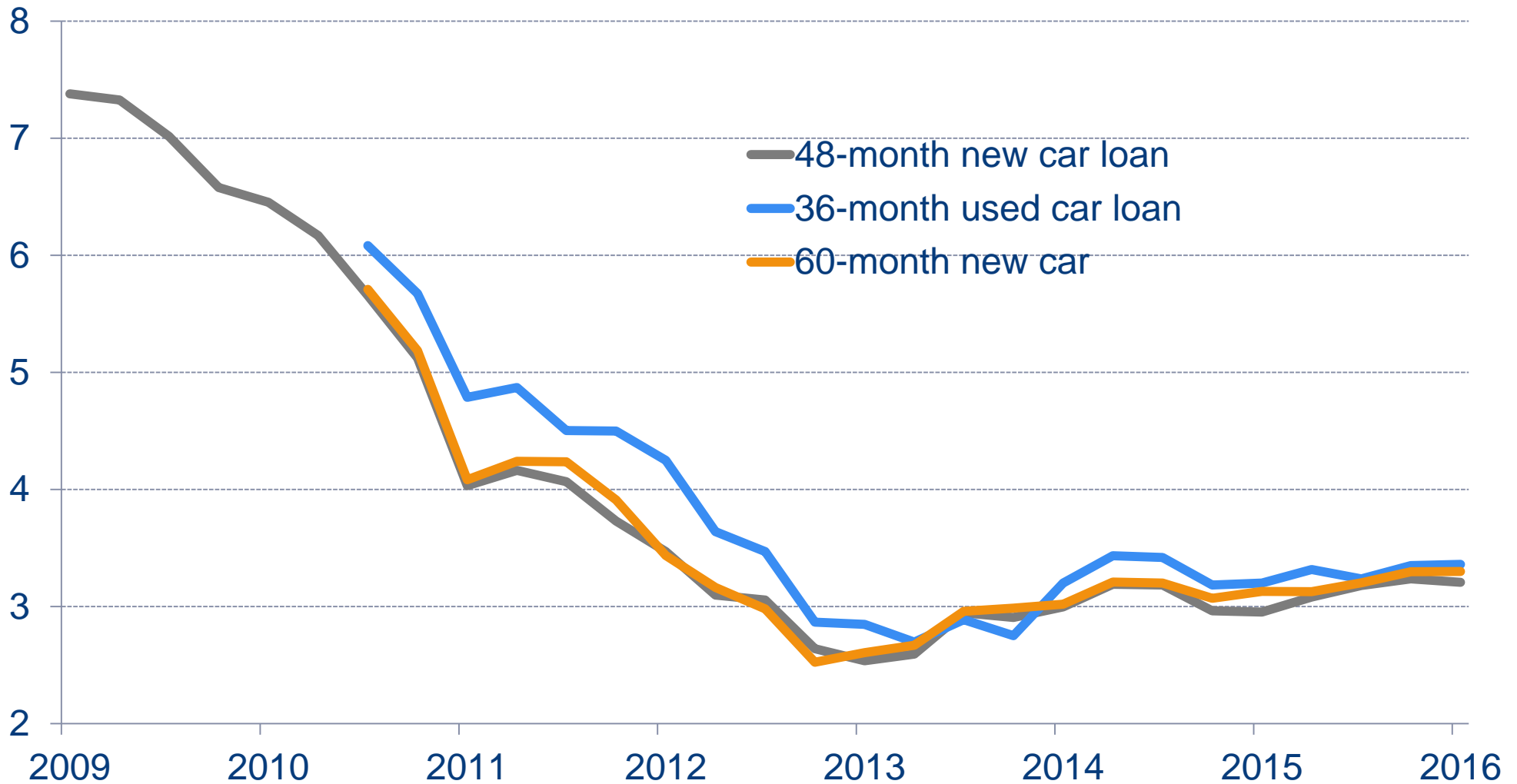
Prices

U.S. Auto prices



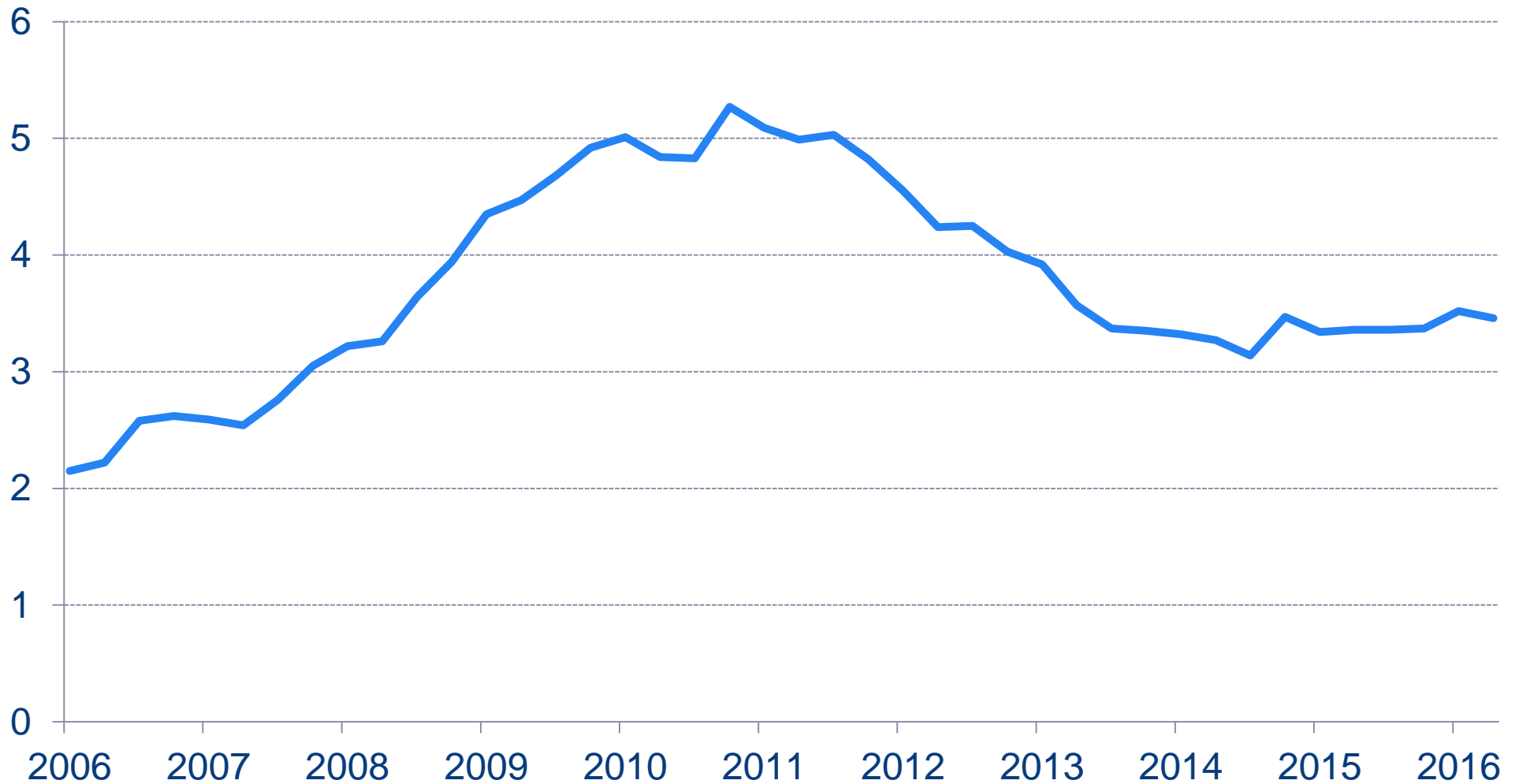
Financing conditions

U.S. Car loan rates (%)



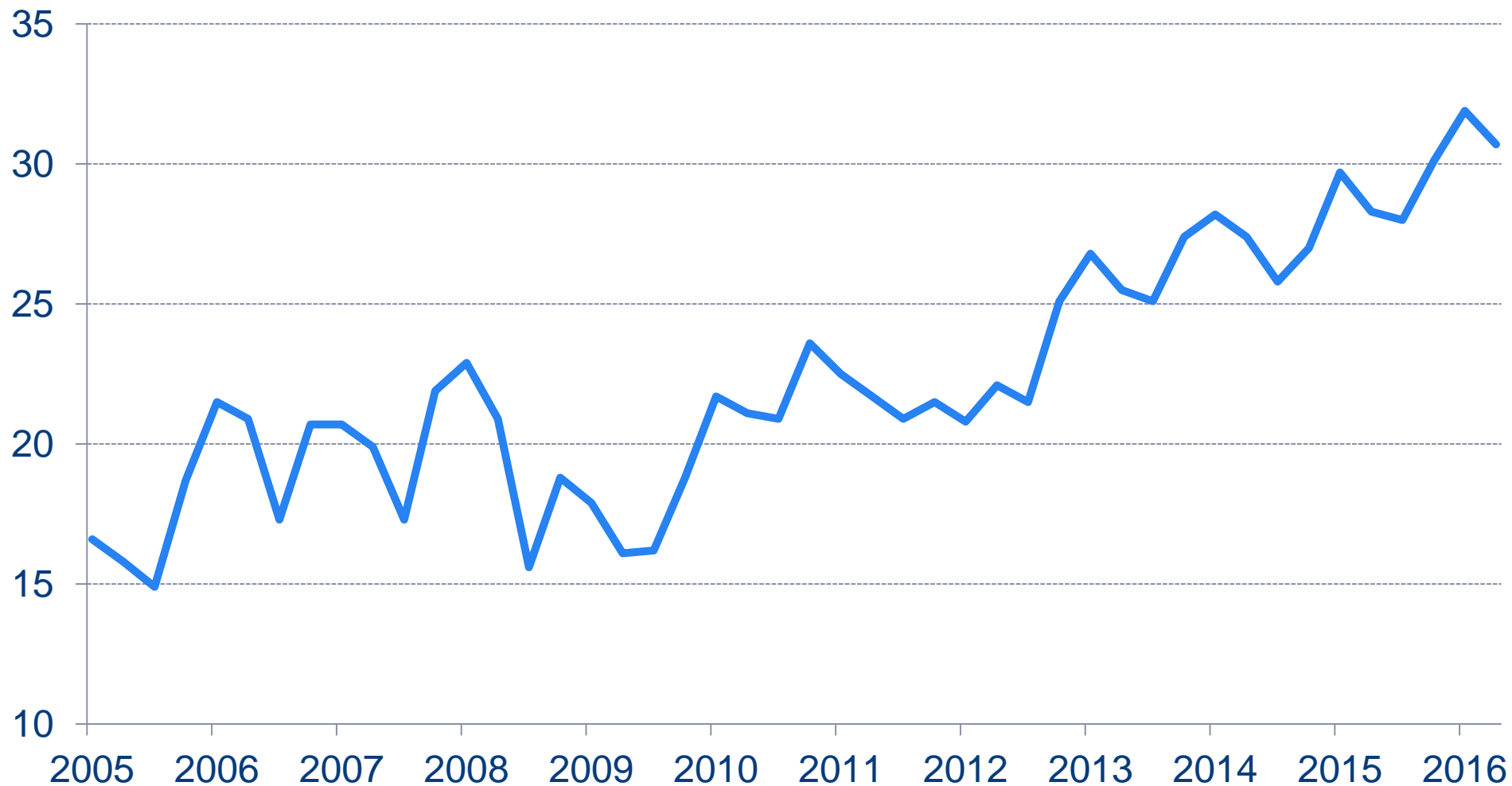
Financing conditions

U.S. Auto loan 90+ days delinquent (% of balance)



Financing conditions

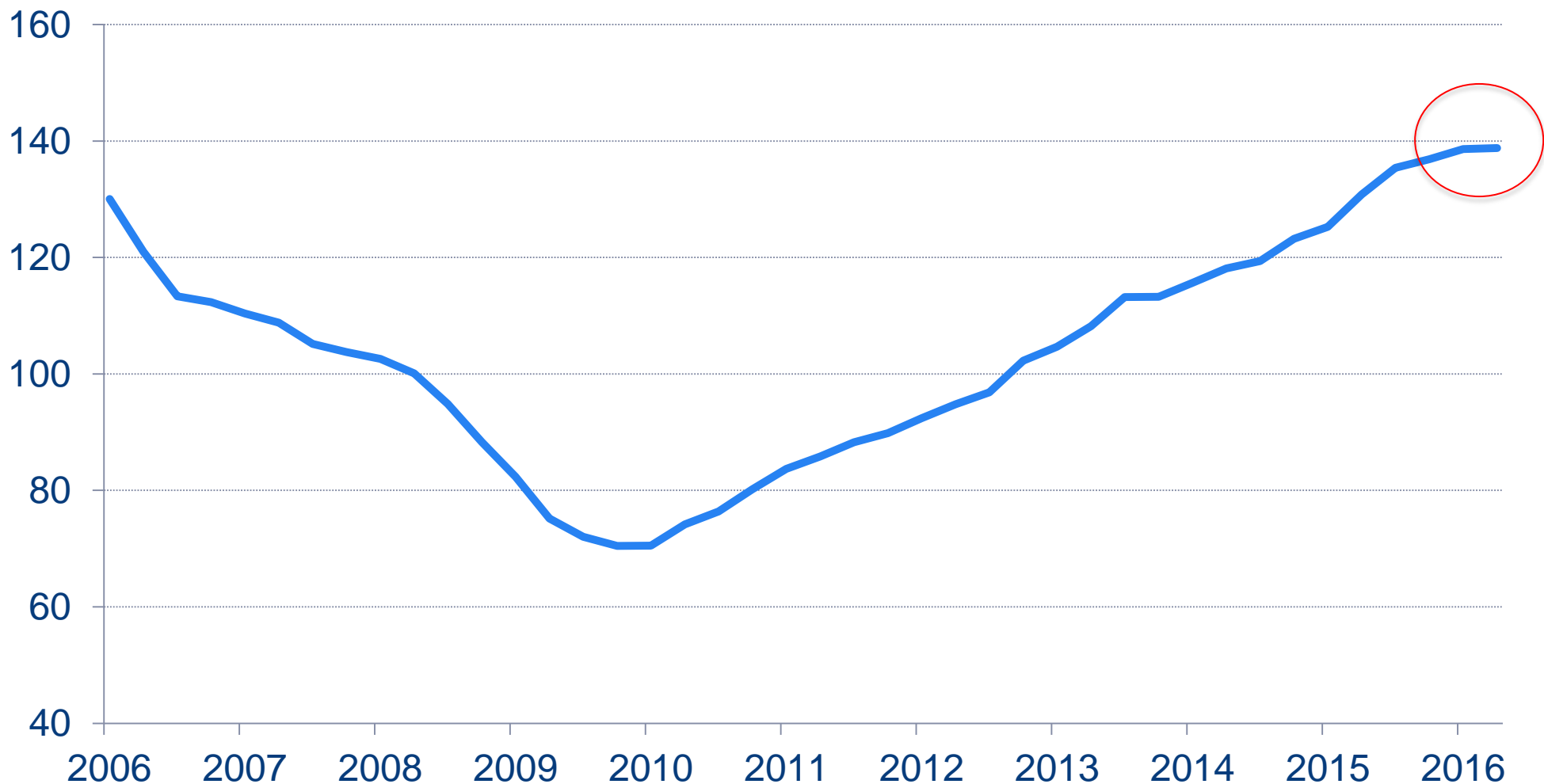
U.S. Leasing penetration rate (%)



Source: Bloomberg

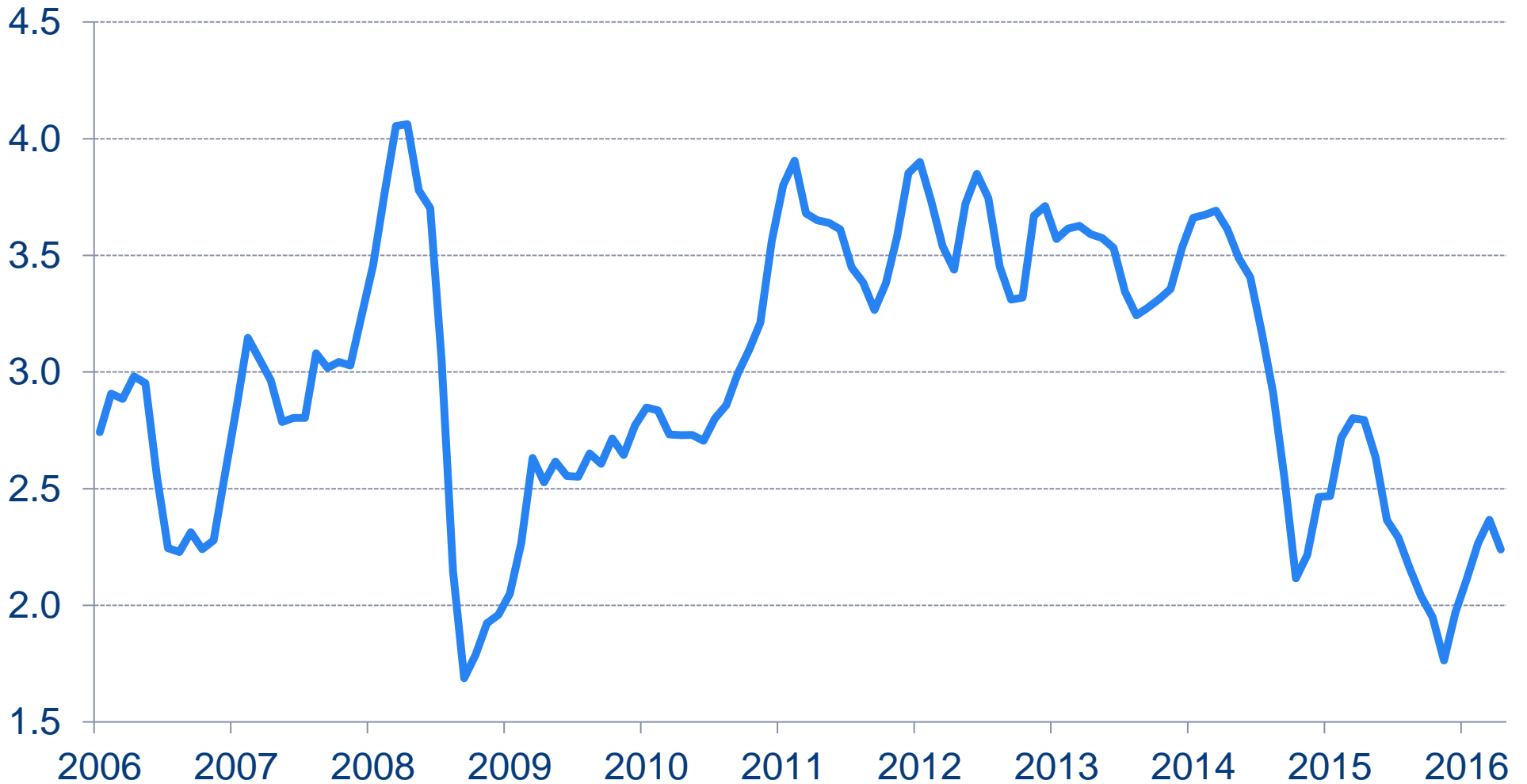
Financing conditions

U.S. Newly originated installment auto loans (\$ billion, eop, 4-qtr moving ave.)



Gasoline

U.S. Spot price (\$/gallon)

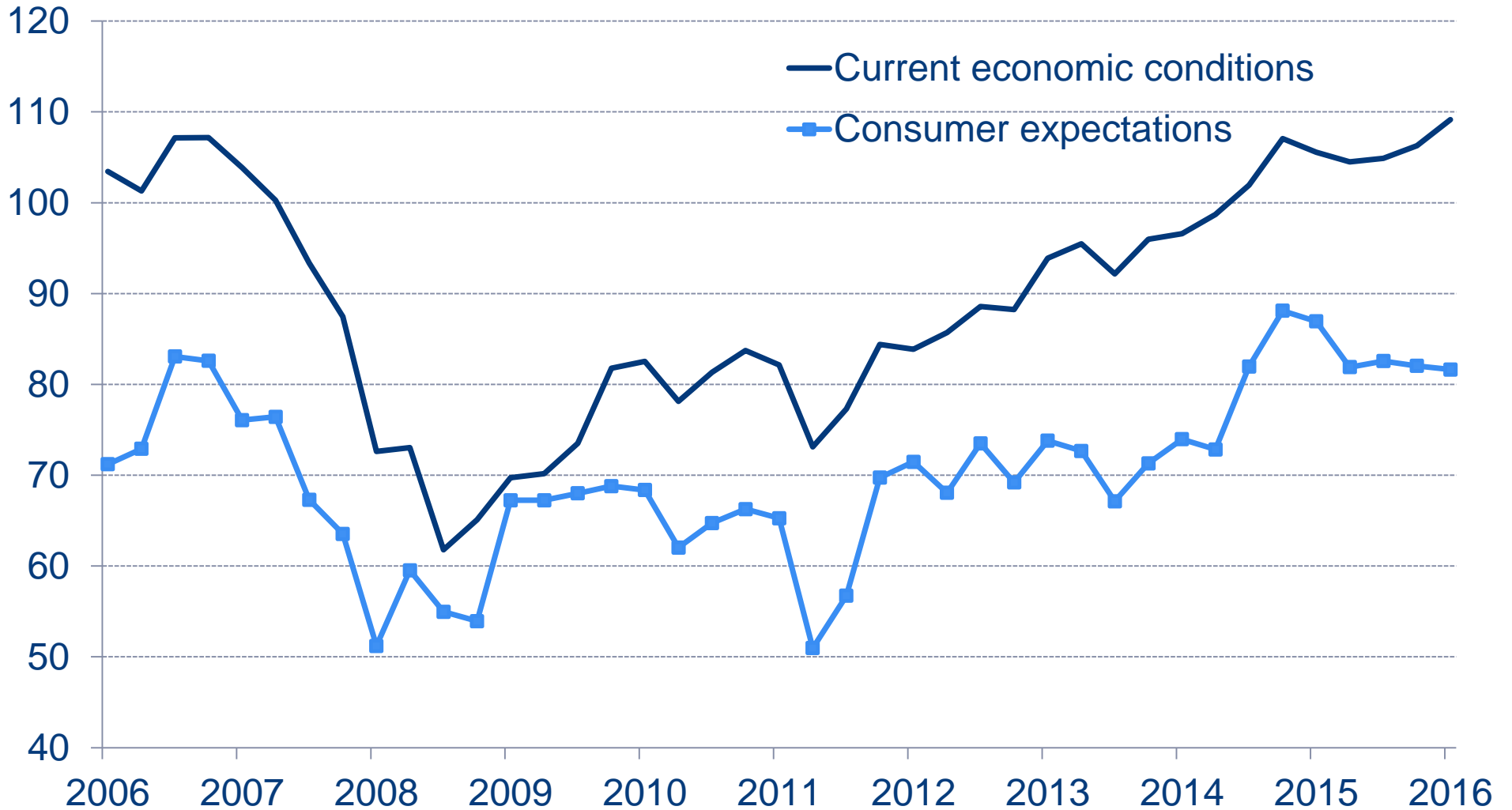


2

Consumers

Consumers

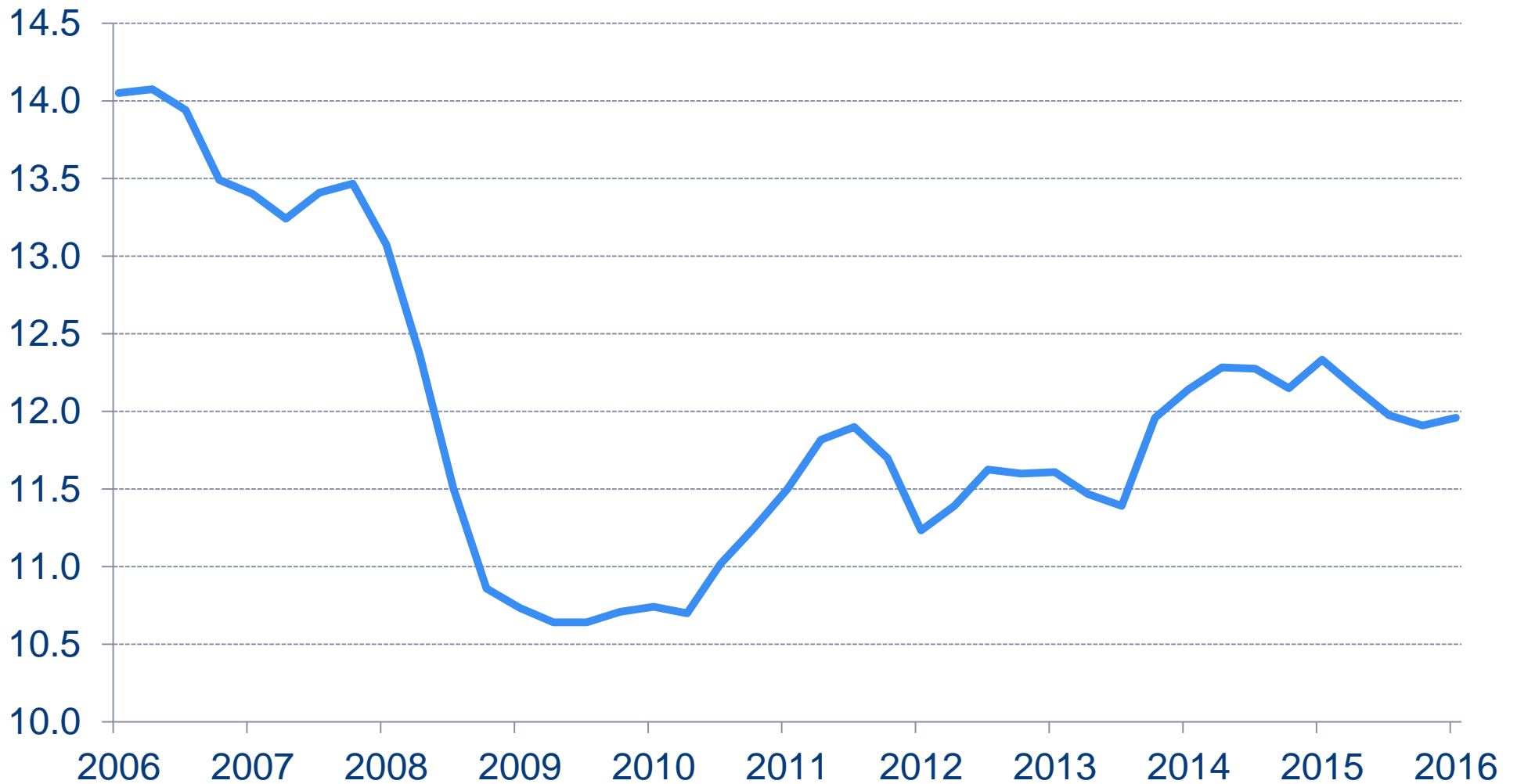
U.S. Consumer sentiment index



Source: Haver Analytics

Consumers

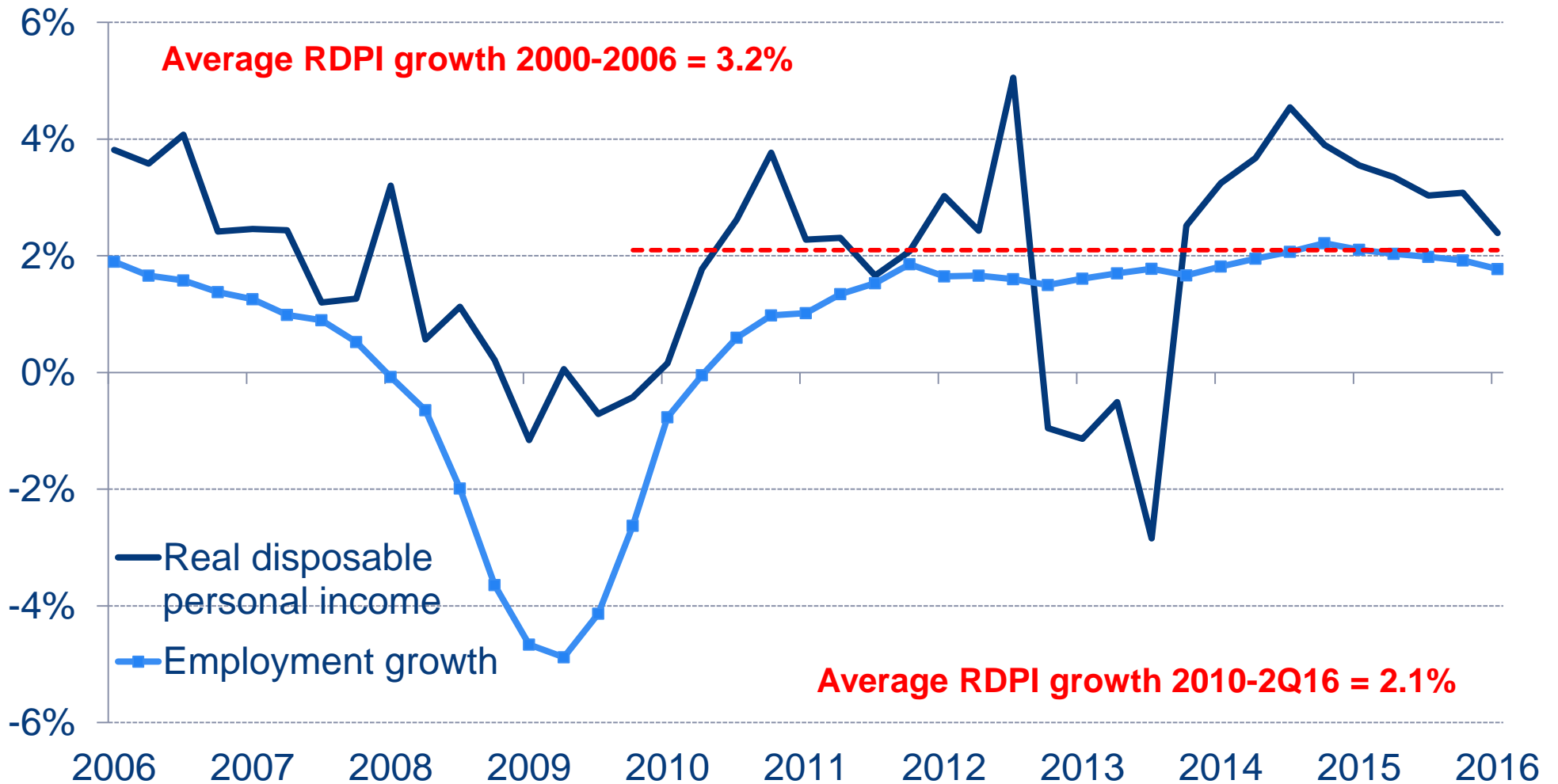
U.S. Plans to buy a car within 6 months (% of respondents)



Source: Haver Analytics

Consumers

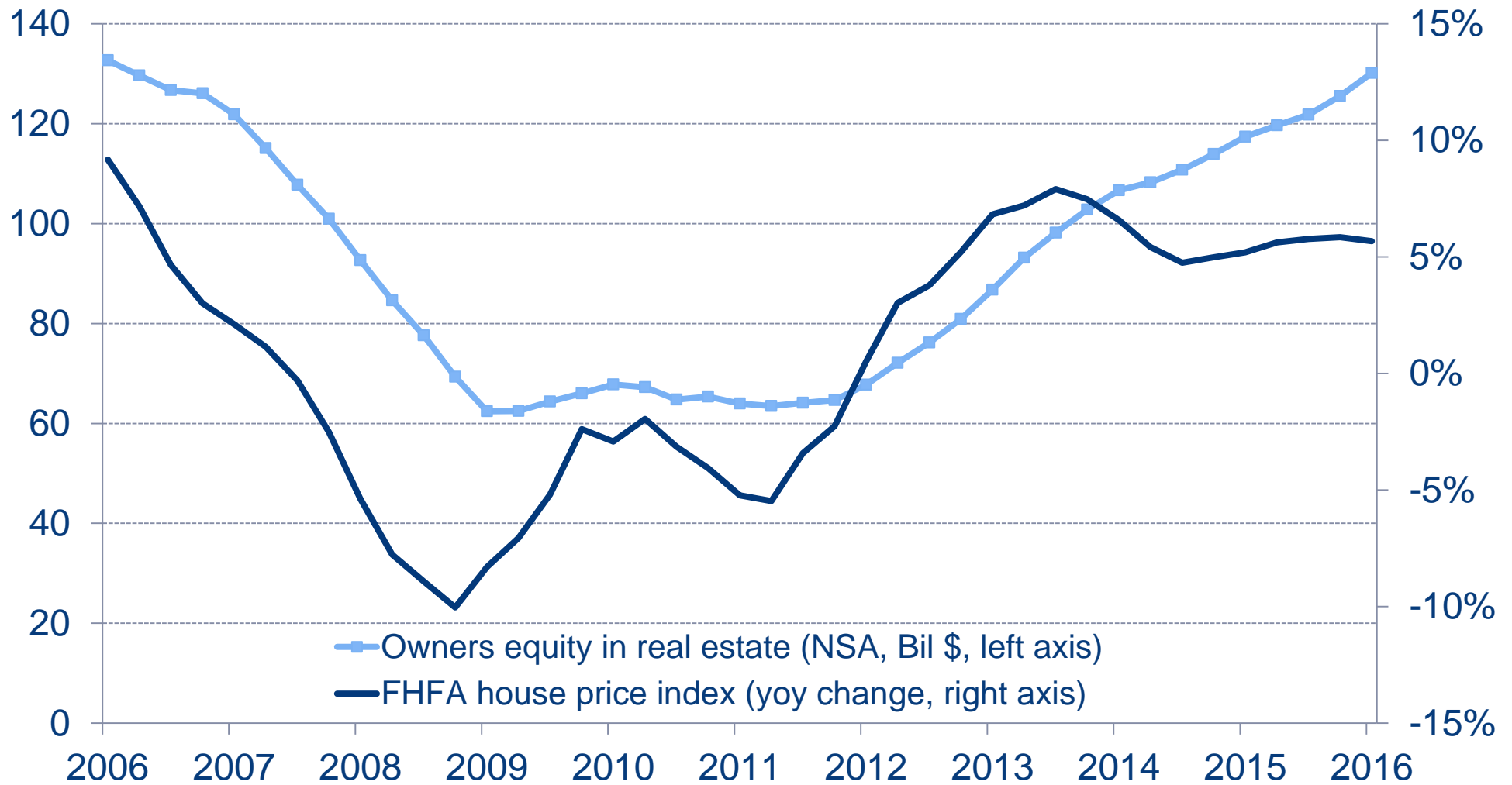
U.S. Employment and real disposable personal income growth (yoy % change)



Source: Haver Analytics

Household equity

U.S. Household equity and home prices

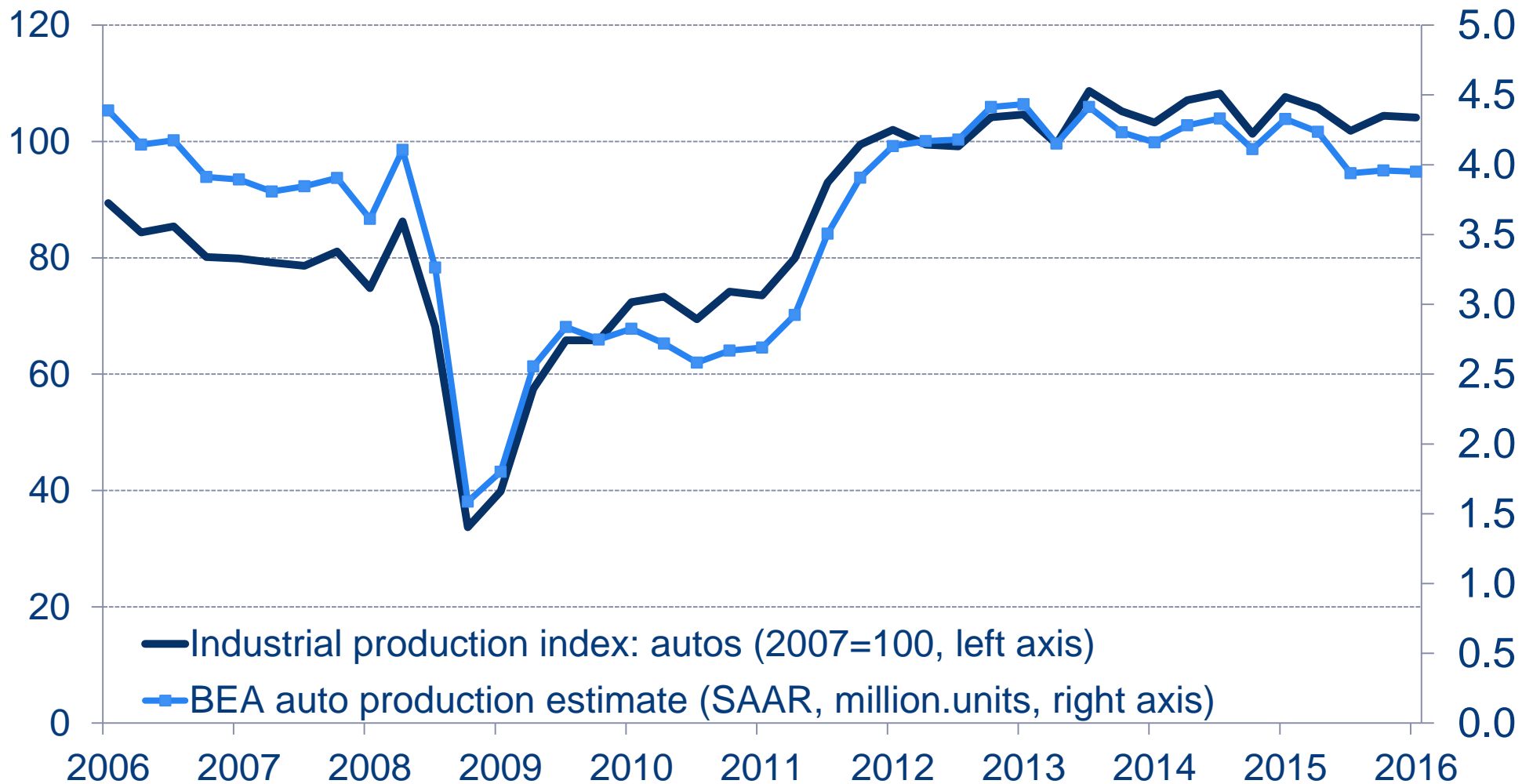


3

Production

Production

U.S. Auto production



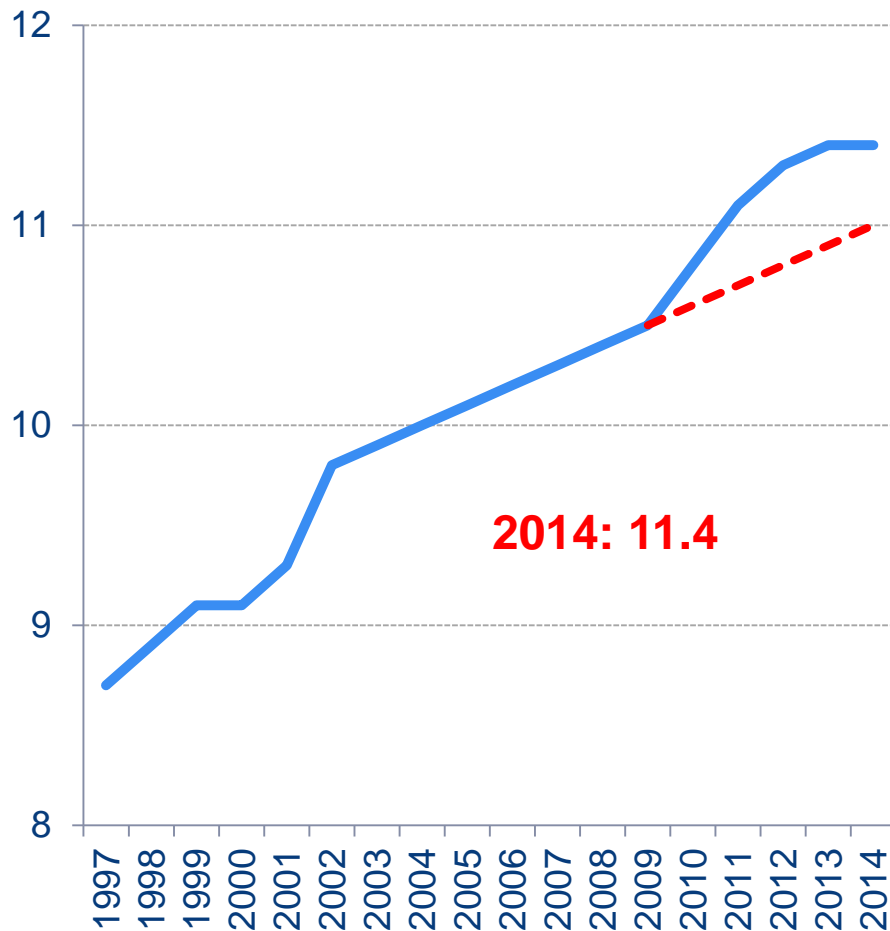
4

Structural

Fundamentals

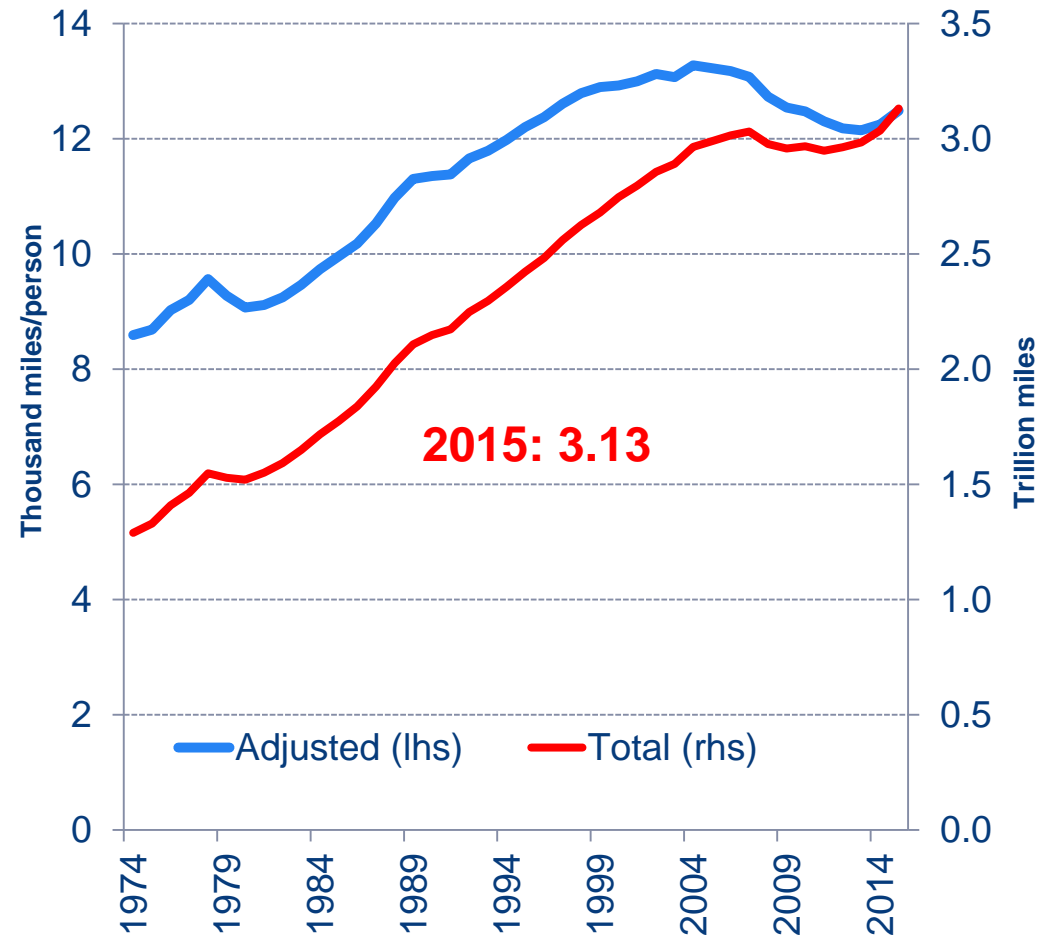
Mean age of passenger cars in operation

Years



Vehicle miles of travel

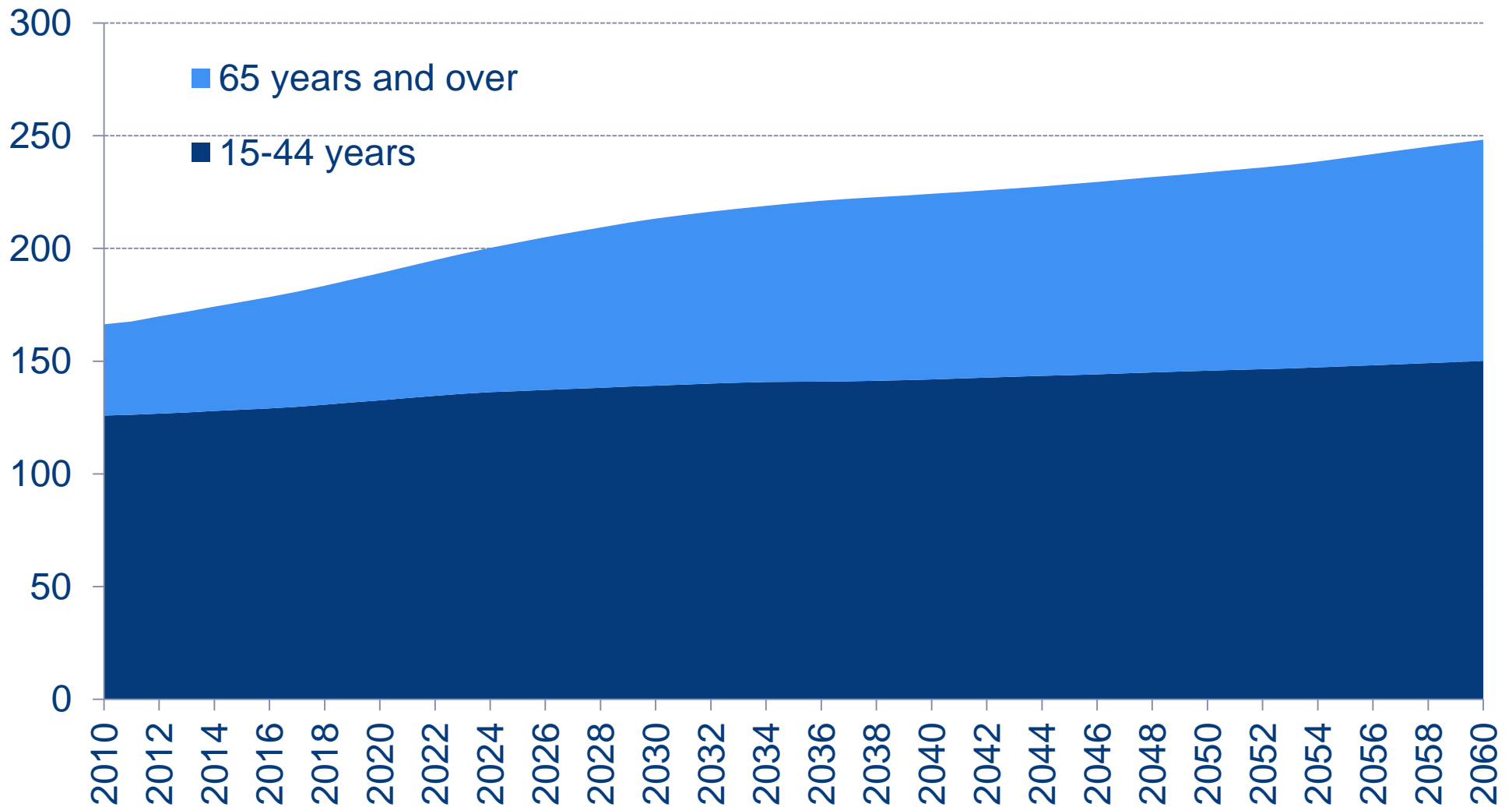
Total and adjusted by labor force



Source: Haver Analytics

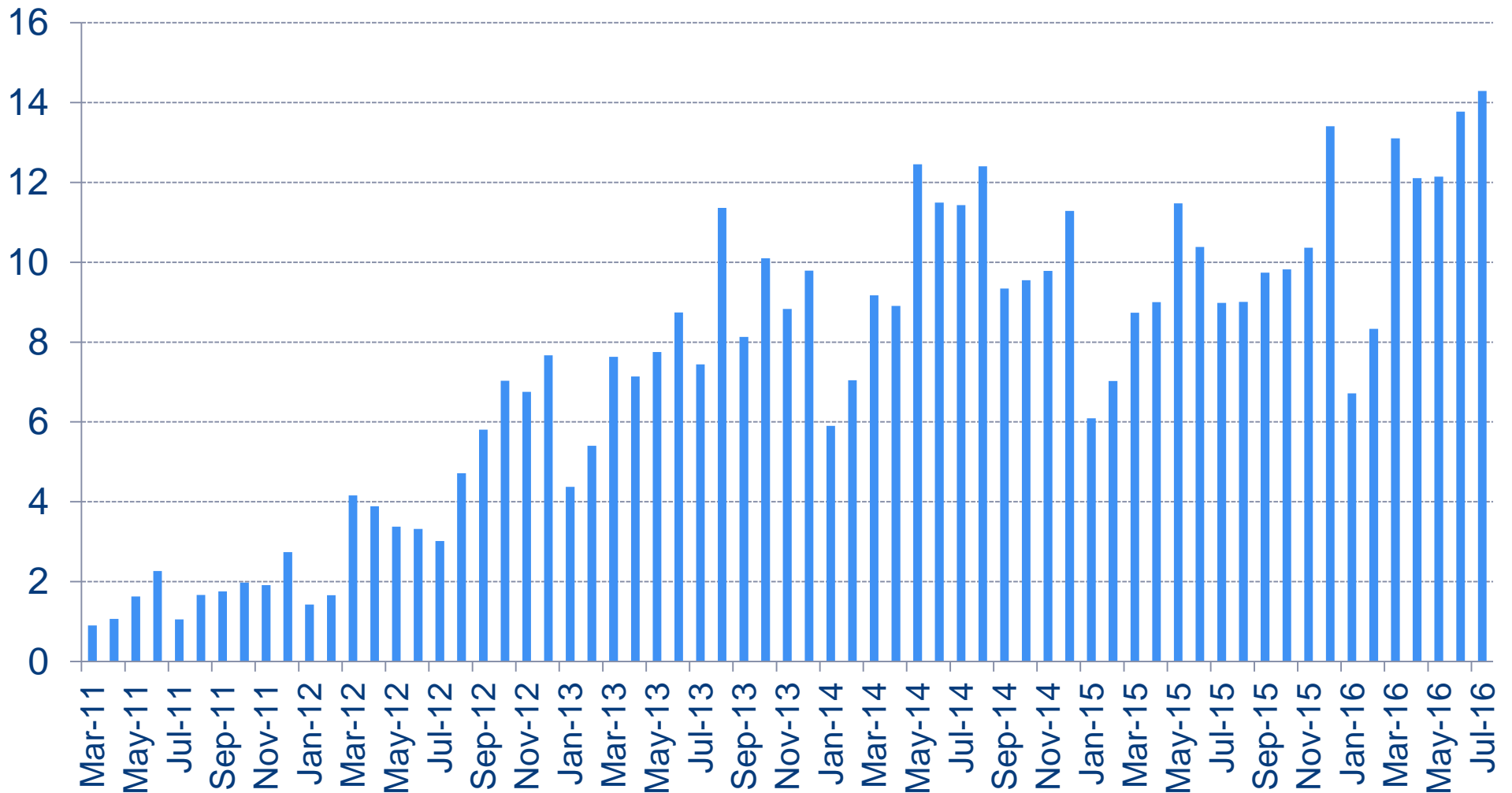
Demographics

U.S. Population projections by age (millions)



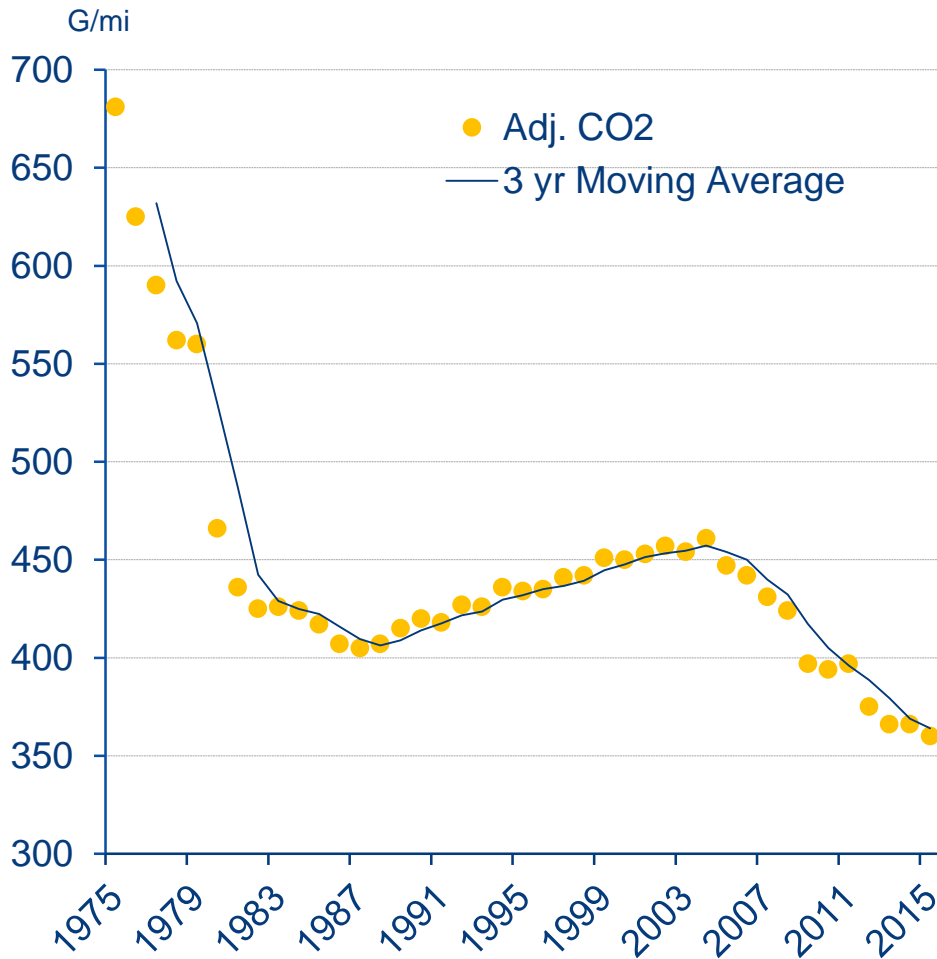
Alternative vehicles

U.S. New plug-in vehicle sales (thousands)



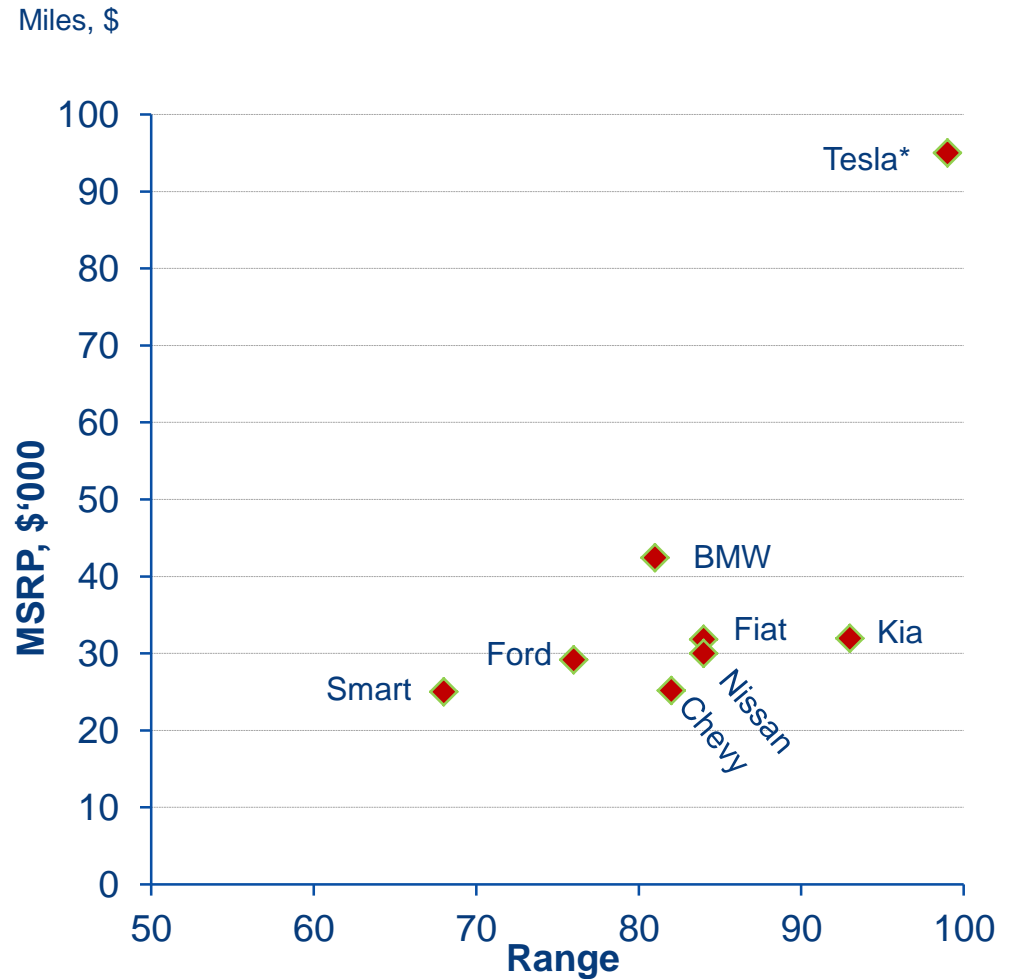
Alternative vehicles

Adjusted CO₂ emissions for new vehicles by model year*



Source: EPA
*2015 data is preliminary

Range and price of selected electric vehicles



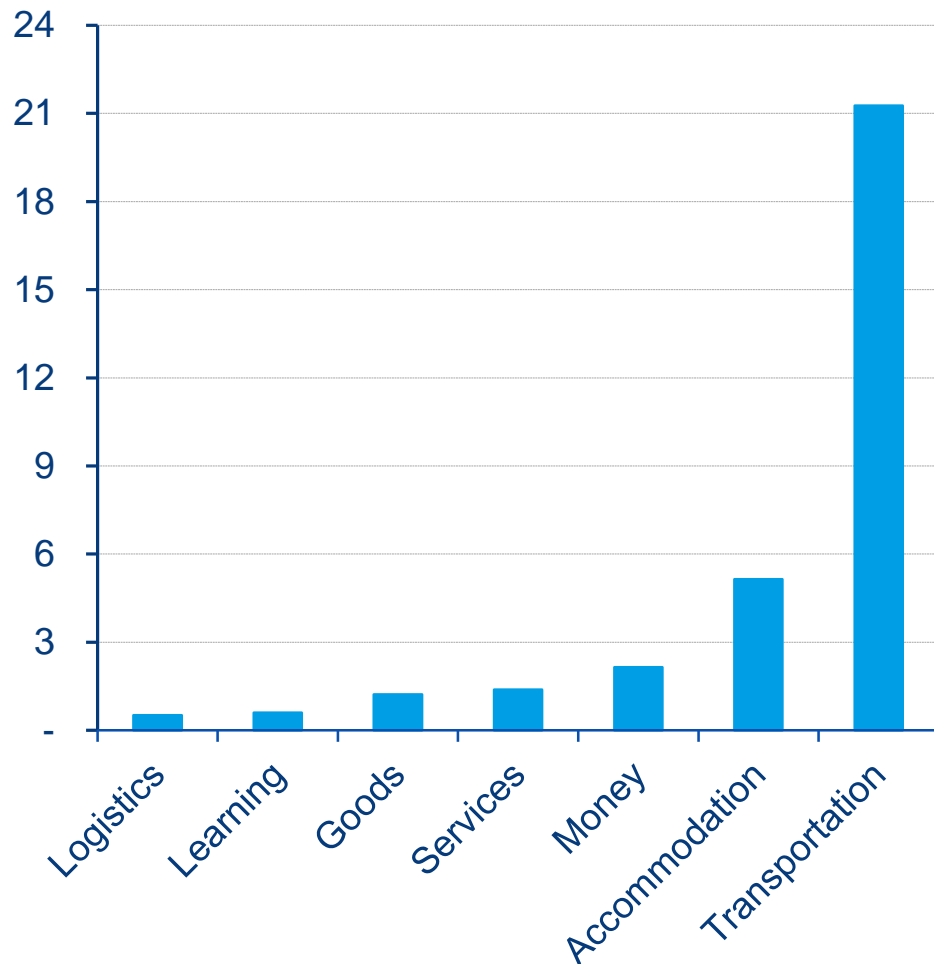
Source: Company Websites, U.S. Dept. of Energy

*Tesla scaled for fit. Actual range is 270 at MSRP \$108,000.
Data provided for 2016 models of Tesla Model S-P90D, Kia Soul Electric, Fiat 500e, Nissan Leaf, Chevy Spark Electric, BMW i3, Ford Focus Electric, Smart Electric

Sharing economy

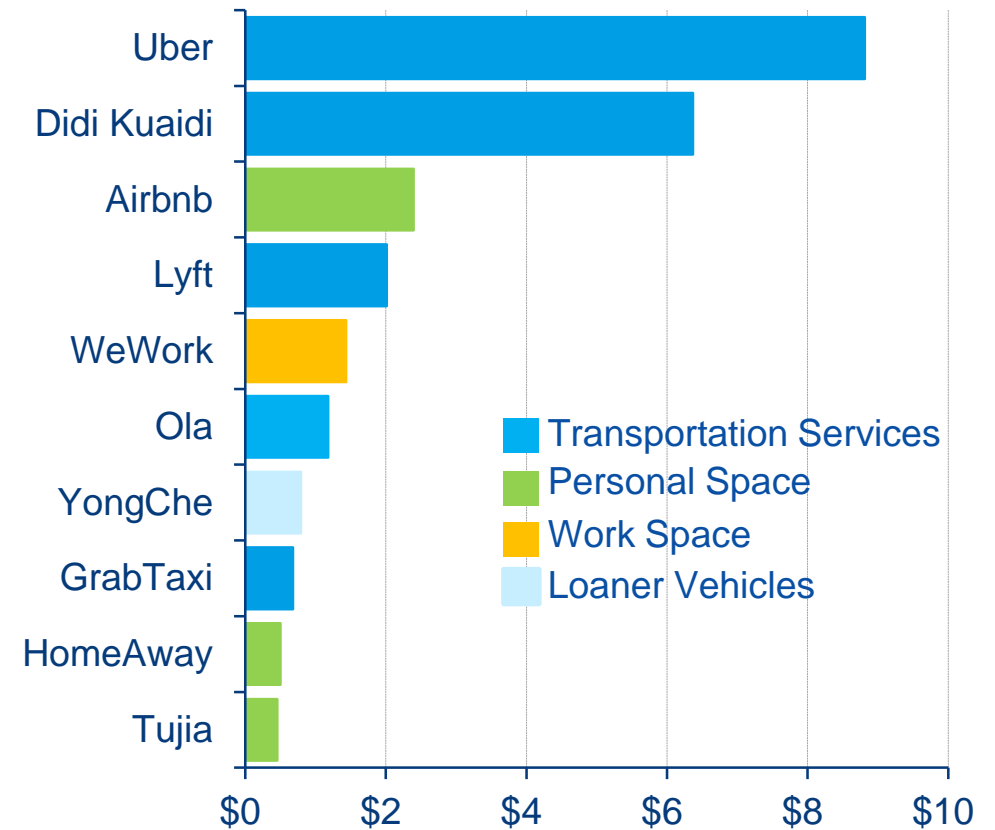
Sharing economy funding by sector*

\$billion



Top 10 funded startups in sharing economy

\$billion



Source: Crowd Companies

5

Forecasts

Forecasts

Average	2013	2014	2015	2016	2017	2018
Auto sales (millions units)	15.6	16.5	17.4	17.4	17.0	16.5
Real GDP growth (% change)	1.7	2.4	2.6	2.0	2.1	2.2
Unemployment rate (% avg.)	7.4	6.2	5.3	4.8	4.6	4.5
Fed funds (%, eop)	0.25	0.25	0.50	0.75	1.25	1.75
5-year Treasuries (%, avg)	1.17	1.64	1.53	1.24	1.49	1.94

U.S. Auto Industry Chartbook

BBVA Research USA

Houston, TX

August 2016