

City of Philadelphia Revenue Outlook, 2020-2025

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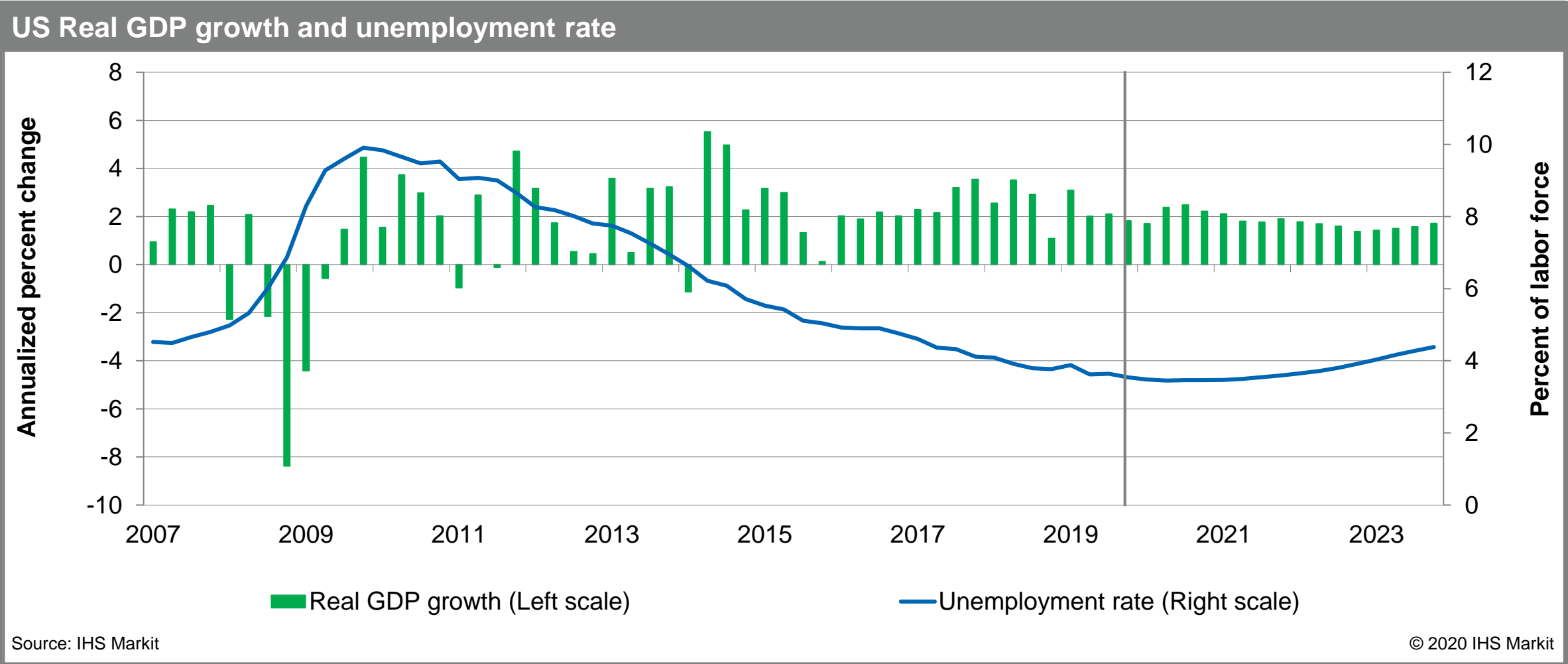
United States Economic Outlook

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US economic growth slightly above its 2% trend

- Favorable financial conditions and federal fiscal stimulus support economic growth slightly above the country's full-employment potential of about 2%.
- Consumer spending is leading the US expansion, supported by solid gains in employment, real wages, and household wealth.
- Capital spending stalled in 2019, but should pick up in 2020 with a better trade policy environment and a resumption of Boeing 737 MAX aircraft deliveries.
- Diminishing fiscal stimulus, labor-supply constraints, a reversal of monetary easing, and slower gains in household wealth will contribute to a slowdown in real GDP growth after 2020.
- Falling oil prices and dollar appreciation will keep inflation in check in the near term. Core inflation is projected to edge up to about 2.0% in 2021 as low unemployment fuels wage acceleration.

The US economic expansion will continue, with the unemployment rate reaching a low of 3.4% in 2020



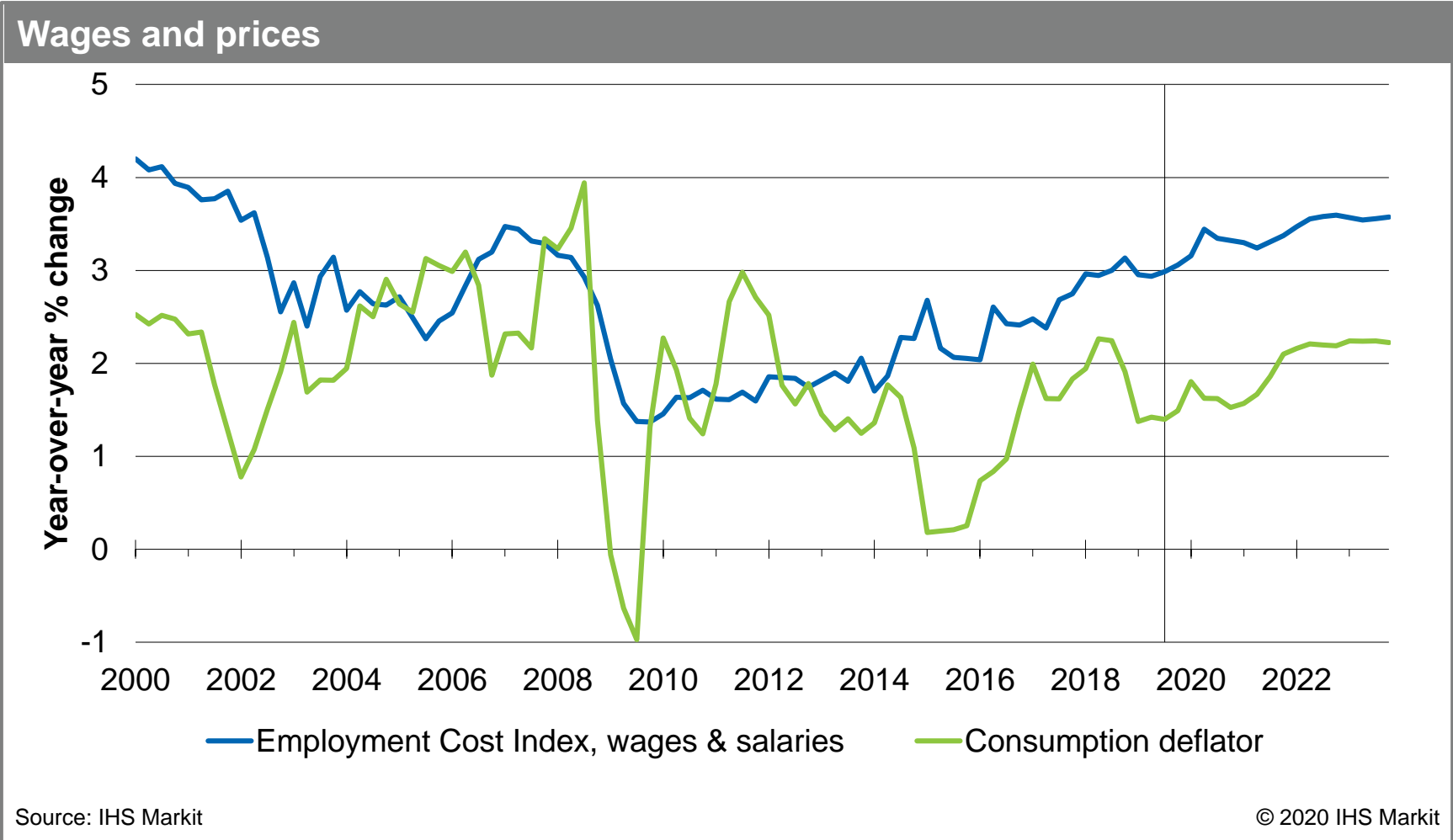
The consumer market environment remains favorable

| Consumer market indicators | | | | |
|-------------------------------------|------|------|------|------|
| Percent change | 2018 | 2019 | 2020 | 2021 |
| Real consumption | 3.0 | 2.6 | 2.8 | 2.7 |
| Real disposable income | 4.0 | 3.0 | 2.2 | 2.6 |
| Real household net worth | -1.2 | 8.9 | 2.5 | 1.0 |
| Payroll employment | 1.7 | 1.6 | 1.2 | 0.8 |
| Real wage rate | 0.9 | 1.5 | 1.6 | 1.5 |
| Consumption price deflator | 2.1 | 1.4 | 1.6 | 1.8 |
| Light-vehicle sales (Millions) | 17.2 | 17.0 | 16.7 | 16.5 |
| Single-family home sales (Millions) | 5.36 | 5.44 | 5.65 | 5.59 |

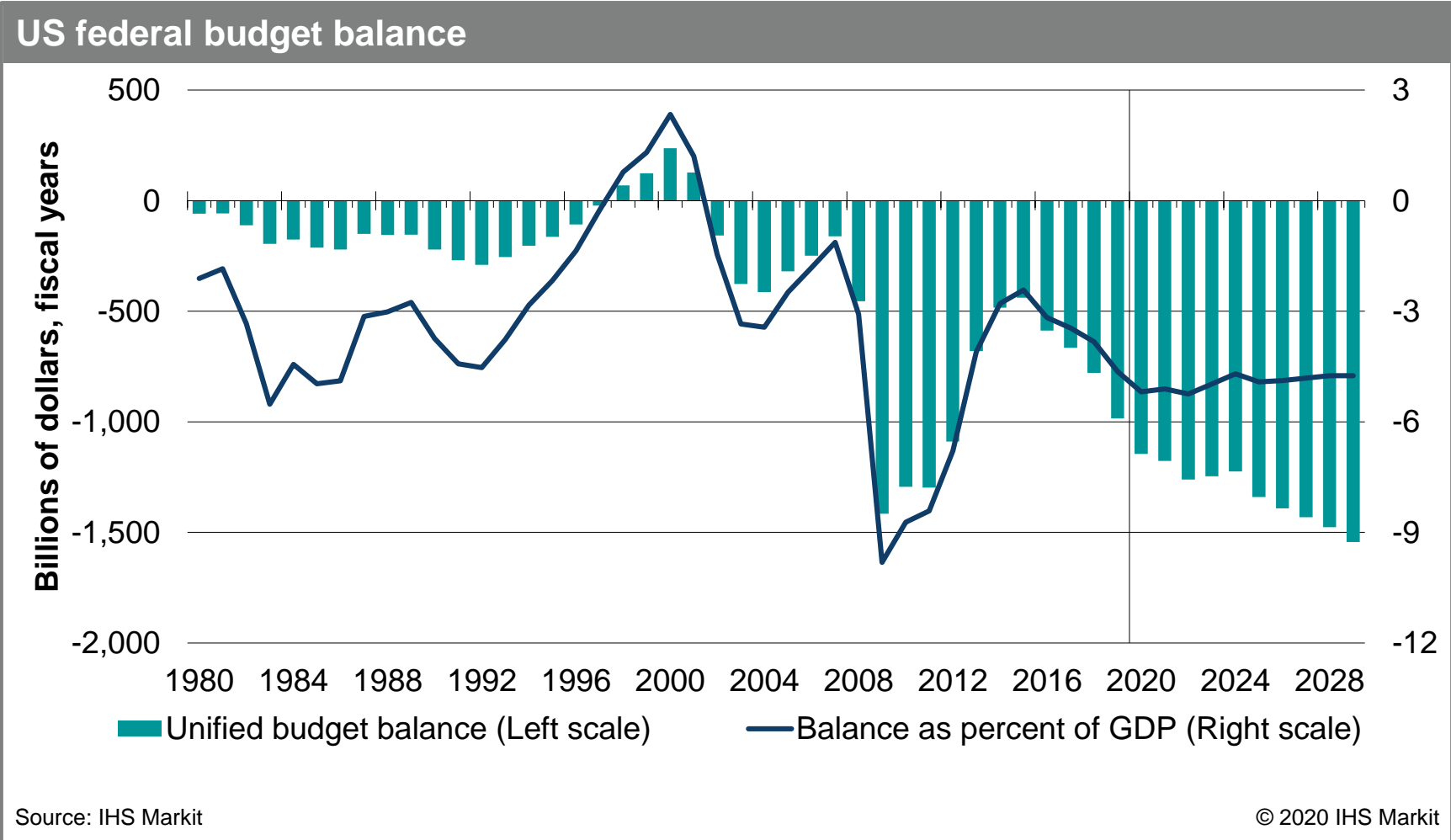
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Wage gains are outpacing consumer price inflation



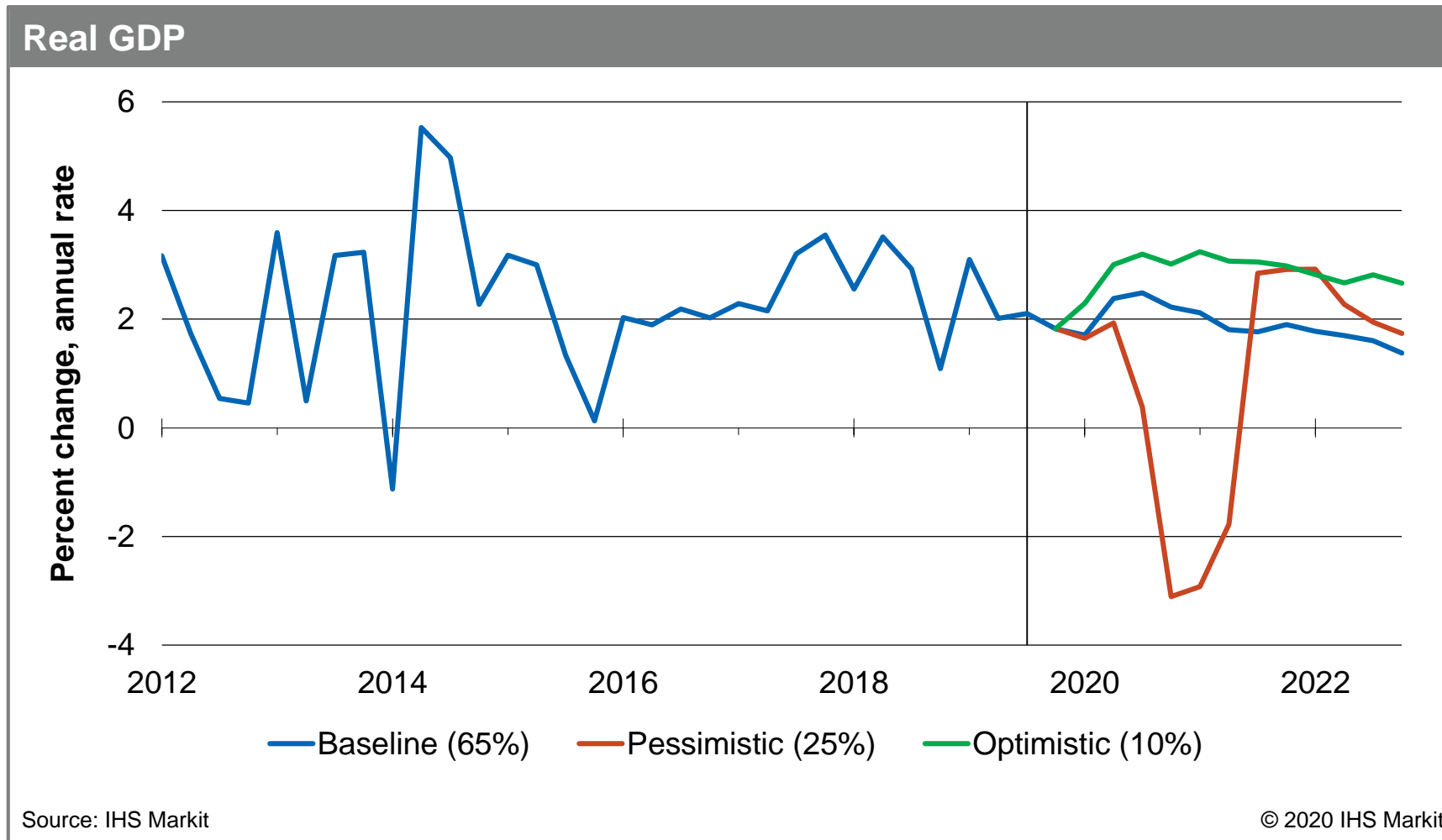
US federal budget deficits are increasing as a result of increases in budget authority and 2018 tax cuts



Risks to the US Forecast

| Scenario | Characteristics |
|--|--|
| <p>Loss of confidence and risk aversion result in a three-quarter recession (Probability = 25%)</p> | <ul style="list-style-type: none"> • After a record-long expansion, real GDP contracts 2.0% over three quarters beginning in the fourth quarter of 2020. • A broad loss of confidence and corrections in real estate prices and equity values lead to declines in business fixed investment, homebuilding, and consumer durables spending. • With limited scope for policy stimulus, recovery is slow. |
| <p>Strong productivity growth and a less inflation-prone economy (Probability = 10%)</p> | <ul style="list-style-type: none"> • Faster productivity gains restrain inflation and boost real income growth. Real GDP growth averages 0.9 percentage point higher than baseline rates over 2019–29. • Household formation picks up, supporting homebuilding. • The full-employment unemployment rate is 4.0%. • Despite a stronger global economy, import growth outpaces export growth and the current-account deficit widens. |
| <p>Baseline forecast (Probability = 65%)</p> | <ul style="list-style-type: none"> • Real GDP growth averages 2.0% from 2019 to 2029. • Personal tax cuts are extended and entitlement spending follows current program guidelines. • Core inflation rises to slightly above 2.0% by 2021. • The federal funds rate is raised 100 basis points from mid-2021 through 2023, reaching a target range of 2.50–2.75%. • The full-employment unemployment rate is 4.6%. |

Real GDP growth in alternative scenarios



Bottom line for the US economy

- Annual real GDP growth will slow from 2.9% in 2018 to 2.3% in 2019, 2.1% in 2020 and 2021, and 1.7% in 2022.
- Consumer spending will drive the expansion forward, supported by (diminishing) gains in employment, real wages, and household wealth.
- Falling energy prices, a strong dollar, and rising productivity will restrain headline inflation in the year ahead. Core inflation will hover near 2%.
- With the expansion continuing, the Federal Reserve's interest rate cuts will be reversed; the federal funds rate will reach 2.50–2.75% in 2023.
- Near-term financial conditions will remain volatile, as uncertainty over tariffs and concerns about growth abroad rise and fall.
- The probability of a recession starting in late 2020 is about 25%.

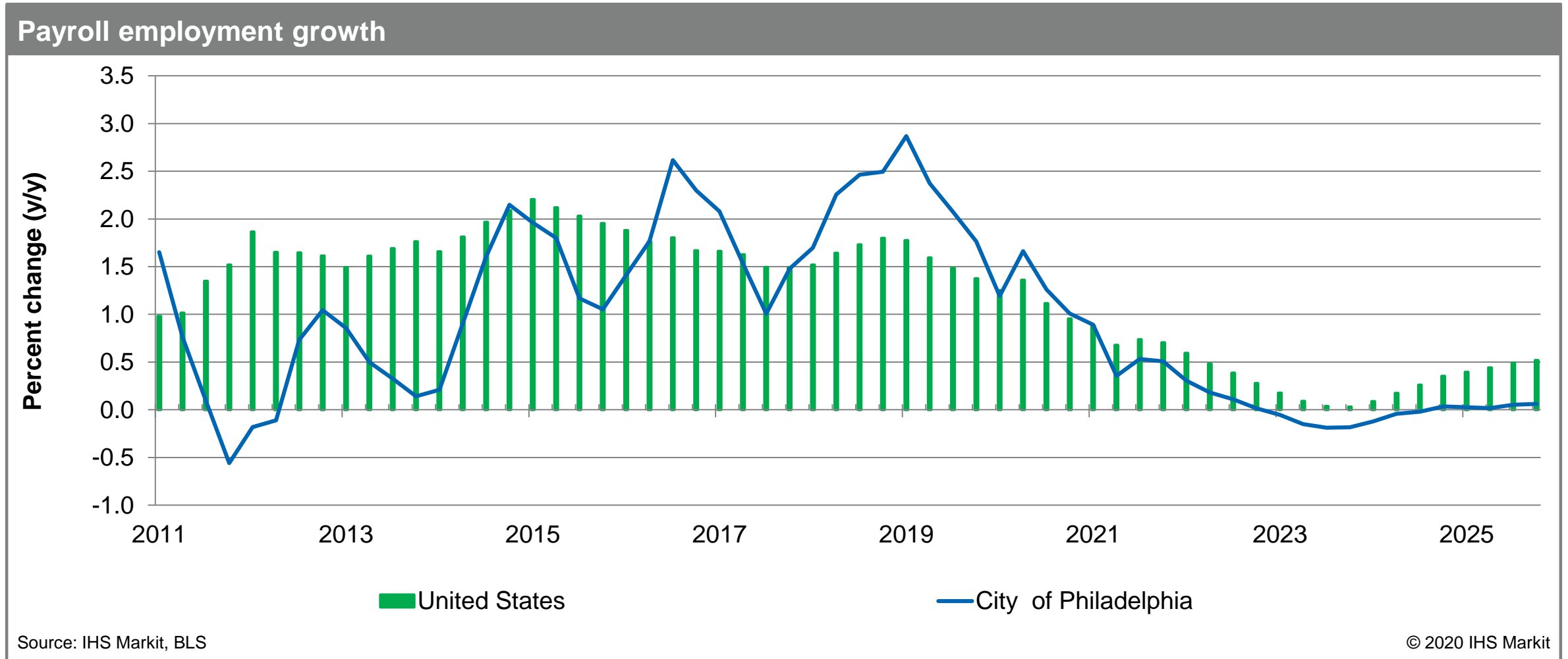
Philadelphia Region Economic Outlook

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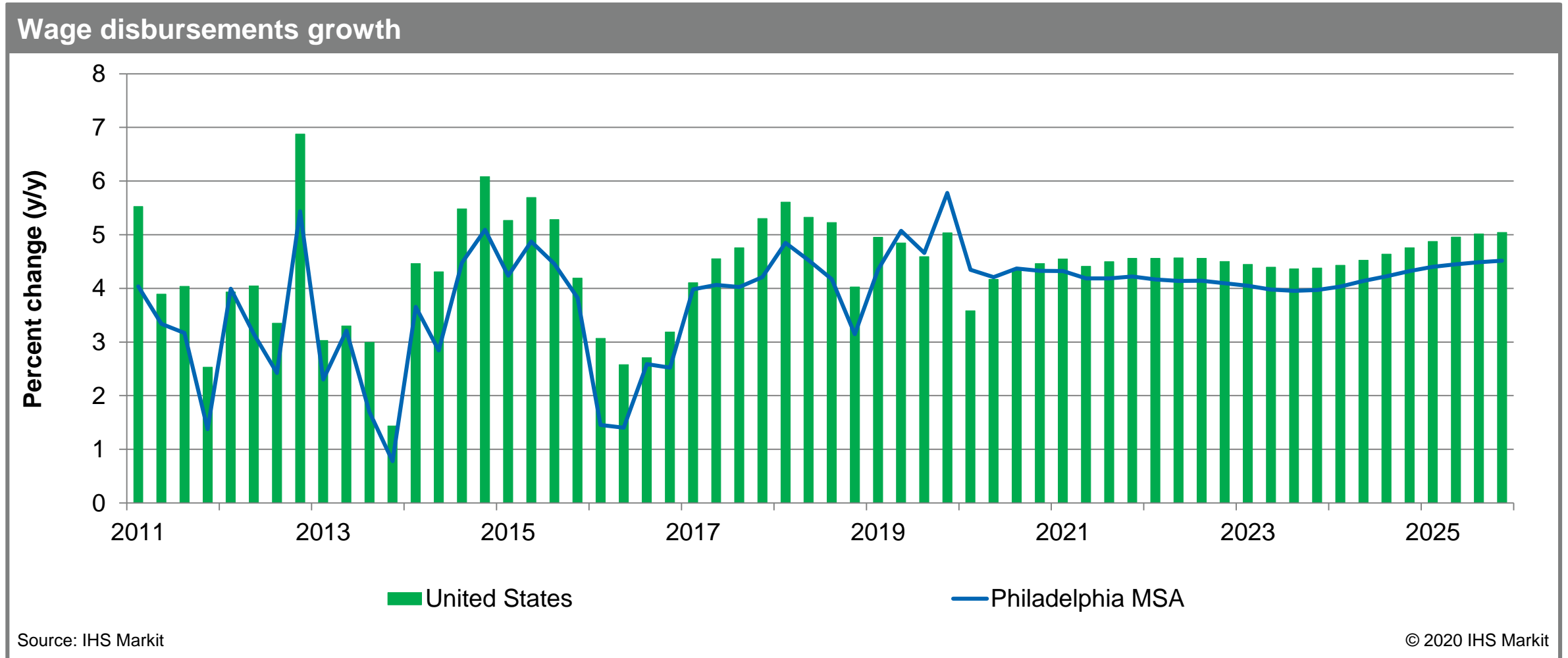
City of Philadelphia's economic growth has caught up with national pace – rest of MSA mostly lagging for now

- Economic growth in the City of Philadelphia has kept pace with the rest of the country over the past couple of years, especially as measured by payroll growth
 - The surrounding region, however, continues to lag behind the nation
 - This continues a longer-term “role reversal”, reflecting a trend seen in other major metro areas
 - Both city and MSA economic growth affect city tax revenues
- Job gains have extended beyond lower-wage sectors, with notable gains in professional, scientific, and technical business services, for example
- Pipeline for construction projects in Center City starting to fill again
- Future of 1,300 acre PES refinery complex, Hahnemann Hospital site still unclear
- Housing supply and availability has been a relative strength of the region, but plenty of room for concern about lack of affordable housing for lower-wage workers

City employment growth has been well above US recently, but gains in both decline later in forecast period



Higher wages per worker support income growth even as payrolls level off



Wage growth accelerates as labor market tightens

| Key Economic Indicators | | | | | |
|-----------------------------|------|------|-----------------------|------|------|
| | 2019 | 2020 | 2021 | 2022 | 2023 |
| Philadelphia MSA | | | <i>Percent change</i> | | |
| Payroll employment | 1.1 | 1.0 | 0.5 | 0.1 | -0.2 |
| Average annual wage | 3.8 | 3.3 | 3.7 | 4.1 | 4.2 |
| Total wage disbursements | 5.0 | 4.3 | 4.2 | 4.1 | 4.0 |
| Personal income | 4.8 | 3.7 | 3.9 | 3.9 | 3.9 |
| Real gross metro product | 2.5 | 1.7 | 1.6 | 1.2 | 1.2 |
| City of Philadelphia | | | | | |
| Payroll employment | 2.3 | 1.3 | 0.6 | 0.2 | -0.1 |
| Average annual wage | 4.1 | 3.2 | 3.7 | 4.0 | 4.2 |
| Total wage disbursements | 6.5 | 4.5 | 4.3 | 4.2 | 4.0 |
| Personal income | 5.7 | 3.9 | 4.1 | 4.1 | 4.1 |
| Real gross metro product | 3.3 | 1.9 | 1.7 | 1.2 | 1.2 |

Forecast Methodology

Model Structure – Underlying Economic Drivers

- Wage and Earnings Taxes
 - wage income
- Sales Tax
 - personal income
- Business Income and Receipts Tax
 - Net Income - U.S. corporate profits, local proprietor's income
 - Gross receipts – local economic output
- Realty Transfer
 - Residential – home sales and prices
 - Commercial

Model Structure, continued

- Net Profits Tax
 - Local proprietors' income
- Parking
 - MSA-level personal income
- Miscellaneous
 - Time series models

Revenue Outlook

Growth in major tax categories will level off in 2021 and beyond

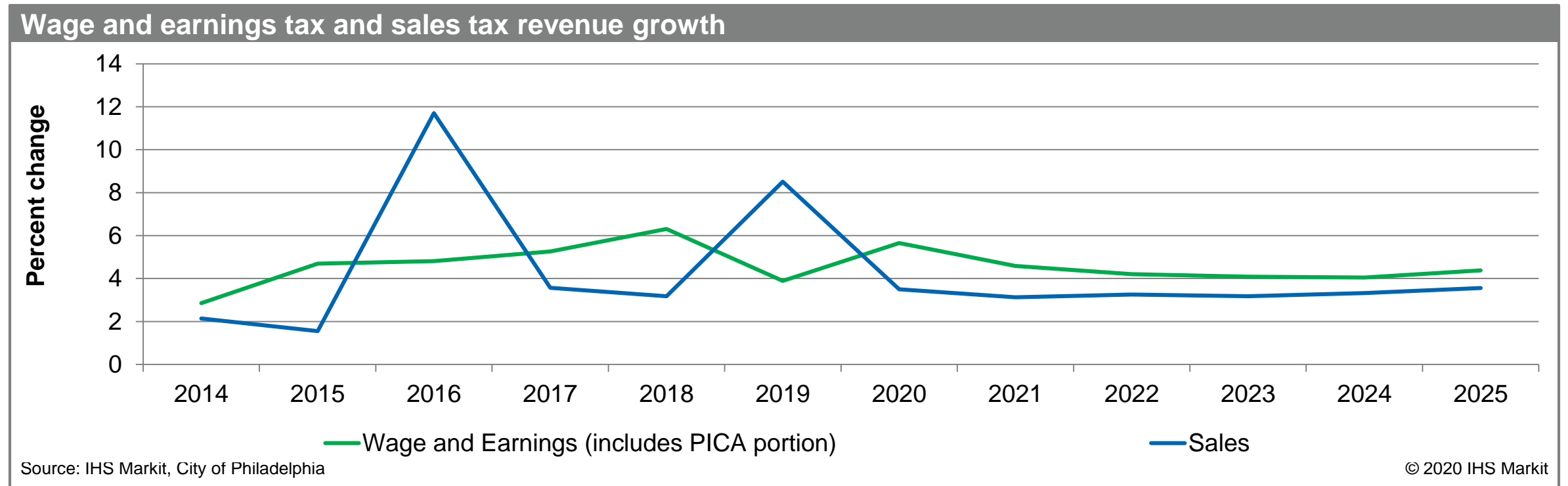
City of Philadelphia tax revenues by category, FY2019-2025

| Category | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|-------------------------------|---------|---------|---------|---------|---------|---------|---------|
| <i>Units: Million dollars</i> | | | | | | | |
| Wage and earnings | 2,078.7 | 2,196.2 | 2,296.8 | 2,393.4 | 2,491.2 | 2,592.1 | 2,705.6 |
| <i>% change</i> | 3.89 | 5.65 | 4.58 | 4.20 | 4.09 | 4.05 | 4.38 |
| Sales | 345.9 | 358.0 | 369.2 | 381.2 | 393.3 | 406.4 | 420.9 |
| <i>% change</i> | 8.51 | 3.49 | 3.13 | 3.25 | 3.17 | 3.33 | 3.56 |
| BIRT | 540.9 | 557.0 | 582.2 | 610.2 | 635.5 | 661.3 | 688.8 |
| <i>% change</i> | 21.25 | 2.98 | 4.53 | 4.82 | 4.15 | 4.06 | 4.16 |
| Realty transfer | 328.4 | 313.5 | 318.3 | 331.1 | 344.9 | 357.7 | 341.2 |
| <i>% change</i> | -0.93 | -4.55 | 1.54 | 4.02 | 4.16 | 3.70 | -4.59 |

Source: IHS Markit

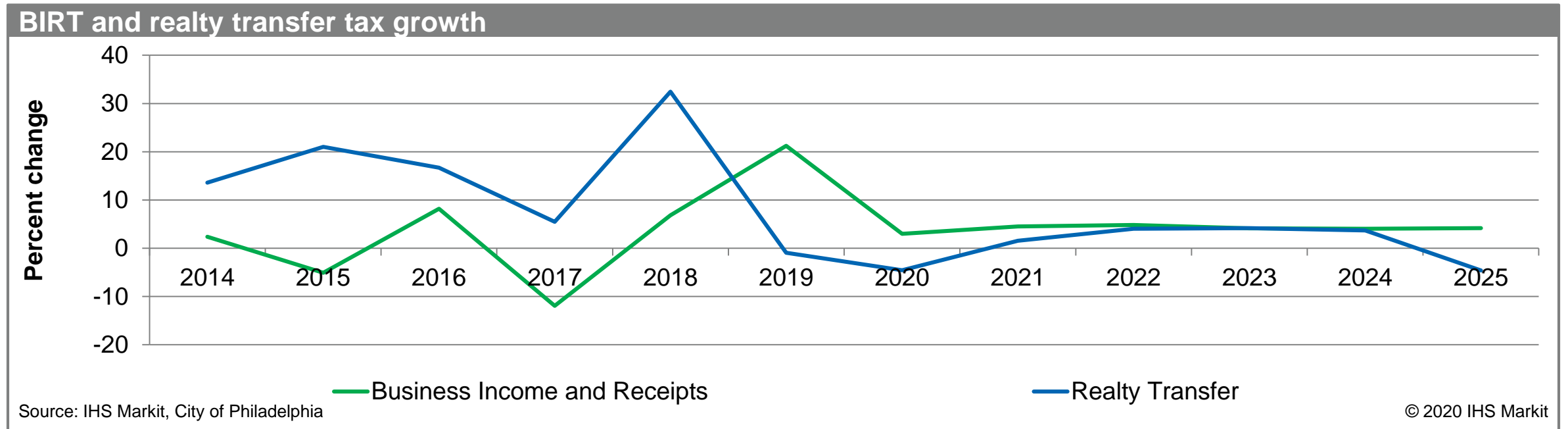
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Wage tax rebounds in 2020; sales tax drops back a bit after a robust 2019



- Both categories enjoying solid years in 2020, thanks to strong payroll growth
- Apparent impact of Federal government shutdown in Oct/Nov 2018 wage taxes was minimal
- Longer-term growth in each depends upon sustained growth in wage rates

BIRT and RTT tax growth chart



- BIRT revenues supported by generally favorable business conditions
 - Credits from earlier overpayments still a wildcard
- Realty transfer tax outlook hinges upon whether CRE can maintain torrid pace of big-ticket sales
 - New building, lower mortgage rates supporting gains in residential activity

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