

# State of Berlin

## Full Rating Report

### Ratings

#### Foreign Currency

|                |     |
|----------------|-----|
| Long-Term IDR  | AAA |
| Short-Term IDR | F1+ |

#### Local Currency

|                |     |
|----------------|-----|
| Long-Term IDR  | AAA |
| Short-Term IDR | F1+ |

### Outlooks

|                                |        |
|--------------------------------|--------|
| Foreign-Currency Long-Term IDR | Stable |
| Local-Currency Long-Term IDR   | Stable |

### Financial Data

#### State of Berlin

|   | 31 Dec<br>16 | 31 Dec<br>15 |
|---|--------------|--------------|
| Operating revenue (EURm)  | 25,642.8     | 23,791.0     |
| Debt (EURm)   | 59,550.3     | 60,415.5     |
| Operating balance/operating revenue (%)   | 14.86        | 14.06        |
| Debt service/current revenue (%)  | 33.66        | 41.82        |
| Debt/current balance (years)  | 24.4         | 34.4         |
| Operating balance/interest paid (x)   | 2.80         | 2.10         |
| Capital expenditure/total expenditure (%)                                       | 8.72         | 7.4          |
| Surplus (deficit) before debt variation/total revenues (excluding new debt) (%) | 1.47         | 0.92         |
| Current balance/capital expenditure (%)   | 83.89        | 72.35        |

### Related Research

[Fitch Affirms 11 German Laender at 'AAA'; Outlook Stable \(November 2017\)](#)

[Higher Tax Growth Helps Laender Budget Consolidation \(November 2017\)](#)

[German Laender Dashboard \(August 2017\)](#)

[Germany \(September 2017\)](#)

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### Key Rating Drivers

**Stability of Solidarity System:** The ratings of the State of Berlin reflect the stability and sustainability of the solidarity system for German Laender. Under the German constitution, member states are jointly responsible for supporting a Land in financial distress. The Laender share equal responsibilities and must be able financially to fulfil their constitutional duties while exercising their right of autonomy. The federal government (the Bund) and all other federal members have to support a Land if it experiences extreme budgetary hardship.

**Liquidity, Good Cash Management:** Liquidity risk is mitigated through bilateral and mutual agreements linking all the federated states and the Bund, ensuring their ability to assist one another. Cash would only not be forthcoming for a Land if there were a complete federation-wide breakdown, in which neither the other Laender nor the Bund could provide cash. Active liquidity management and proper treasury facilities prevent any delays in providing support.

**Extensive Financial Equalisation System:** Extensive equalisation systems and an ambitious solidarity pact compensate for financial disparities. This framework requires financially stronger Laender to transfer some of their above-average tax proceeds to financially weaker ones and to reduce the gaps in financial strength between the Laender to a minimum. Berlin is a net receiver in the financial equalisation system and received EUR3.9 billion in 2016.

**Debt Constraints From 2020:** From 2020, Laender will have to run their budgets without taking on new debt. To comply with the new legislation, Berlin will have to follow a strict consolidation path during a transition period (until 2019). Berlin reduced debt for the fifth consecutive year in 2016. The state expects a surplus before debt variation of about EUR469 million in 2017 according to its budget and aims to retain surpluses in 2018-2021.

**Cost Cutting Successful:** Following its consolidation efforts, Berlin adjusted the former fixed limit on expenditure growth. Based on budget surpluses, expenditure growth is capped by the growth of revenues to ensure compliance with the debt brake rules. However, Berlin needs to expand both operating spending and investments to cope with the city's growth and the inflow of immigrants. The current medium-term financial plan for 2017-2021 complies with the consolidation strategy but envisages a decline in the operating margin to 11%-13%.

**Improving Fiscal Performance:** Berlin's operating margin improved slightly to 14.9% in 2016 (2015: 14.1%). The state's mid-term plan envisages lower margins of 11%-12% in 2017-2021. However, based on tax revenues well above budget, the 2017 performance should remain at least in line with that of 2016 and the operating margin was 16.2% in 3Q17. The state's envisaged surplus before debt variation in 2017-2021 is realistic in our view.

**High Debt Burden:** At end-2016, Berlin's direct risk declined to EUR59.6 billion and fell for a fifth consecutive year, but remains high. Considering its sizeable contingent liabilities, the state has a high overall risk burden. However, given its prudent debt management strategy and current low interest rates, Berlin has been able to reduce its interest burden, and its debt burden is likely to decline in the long term.

### Rating Sensitivities

**Sovereign Downgrade:** A rating downgrade of Germany (AAA/F1+) could lead to a negative rating action on Berlin. Any change in the support scheme would require a review of the state's ratings.

## Principal Rating Factors

### Rating History

| Date      | Long-Term Foreign IDR | Long-Term Local IDR |
|-----------|-----------------------|---------------------|
| 16 Jan 04 |                       | AAA                 |
| 25 Mar 94 | AAA                   |                     |

### Summary: Strengths and Weaknesses

|        | Institutional framework | Debt, liabilities and liquidity | Economy | Fiscal performance | Management and administration |
|--------|-------------------------|---------------------------------|---------|--------------------|-------------------------------|
| Status | Strength                | Weakness                        | Neutral | Neutral            | Strength                      |
| Trend  | Stable                  | Positive                        | Stable  | Positive           | Stable                        |

Source: Fitch

### Map of Germany



Source: Fitch

### Overall Strengths

- Strong institutional framework
- Sustained budgetary performance supporting debt servicing requirements
- Very good access to the capital markets and sound liquidity and cash management

### Overall Weaknesses

- High share of interest expenditure mitigated by low interest rates
- High debt burden and weak debt metrics

### Institutional Framework

According to the German Constitution (Article 20), the 16 Laender are equal partners with the federal government and have the same rights and duties, even though in practice they are subordinate in some areas. Given the mutual support and stable solidarity system, the extensive financial equalisation system and the Laender's good access to liquidity and exhaustive cash management, their ratings are linked to those of Germany (for further information, see *Fitch's Rating Approach for the German Laender* and *Institutional Framework for German Subnationals* under *Related Research*).

### Debt<sup>a</sup> Per Capita of the Laender, End-2016

| Land                          | (EUR)         |
|-------------------------------|---------------|
| Bremen                        | 31,096        |
| <b>Berlin</b>                 | <b>16,477</b> |
| Saarland                      | 14,270        |
| Hamburg                       | 12,880        |
| Schleswig-Holstein            | 9,244         |
| Saxony-Anhalt                 | 9,040         |
| Rhineland-Palatinate          | 8,011         |
| North Rhine-Westphalia        | 7,770         |
| Lower Saxony                  | 7,226         |
| Hessen                        | 6,909         |
| Thuringia                     | 6,761         |
| Brandenburg                   | 6,446         |
| Mecklenburg-Western Pomerania | 5,380         |
| Baden-Wuerttemberg            | 4,256         |
| Bavaria                       | 1,614         |
| Saxony                        | 1,223         |
| <b>Laender average</b>        | <b>6,633</b>  |
| <b>Bund</b>                   | <b>12,755</b> |

<sup>a</sup> Capital market debt  
Source: Federal Ministry of Finance

### Debt, Liabilities and Liquidity

#### Debt and Debt Prospects

At end-2016, Berlin's total direct risk amounted to EUR59.6 billion (233% of current revenue), including EUR114 million of short-term debt (Kassenkredite). Berlin reported a net funding surplus before debt variation of EUR390 million (2015: EUR227 million) in 2016 and was therefore able to reduce debt for the fifth consecutive year, by EUR865 million. This resulted from improved revenues, with growth remaining slightly below that of operating expenditure (see *Fiscal Performance* below).

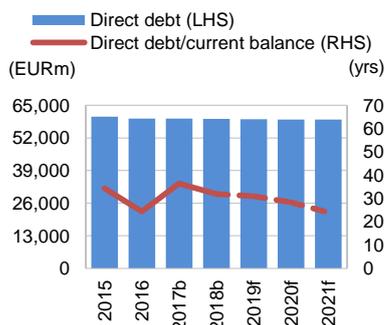
According to its medium-term financial plan 2017-2021, Berlin scheduled net maturing debt of EUR104 million in 2017 (and EUR171 million in 2018) and anticipates debt to decline consecutively over the entire planning period until 2021. Fitch therefore expects Berlin to comply with its plans and to further reduce debt in 2017 at least by the amount indicated above, but we assume the final decline of debt to be above. This would confirm the good progress made so far, and provide some budgetary flexibility ahead of the upcoming introduction of the debt brake.

Maturing debt was predominantly funded by bond issues in 2016 and 2017 and loans' share of total debt outstanding slightly declined to 33% at end-2016 (2015: 35%). The average lifetime of capital markets debt increased from 6.7 years in 2015 to 7.1 years in 2016 and the average annual interest rate fell further to 1.95% (end-2015: 2.2%). The maturity profile lengthened, with about 37.2% (2015: 41.2%) of debt outstanding due within the next four years, about 40.9% (2015: 39.3%) set to mature in between four and 10 years, and 21.9% (2015: 19.5%) in more than 10 years. Berlin has a very low share of foreign-currency debt in Swiss francs and Japanese yen, accounting for a negligible euro-equivalent share of below 0.4% of total debt.

### Related Criteria

[International Local and Regional Governments Rating Criteria - Outside the United States \(April 2016\)](#)

**Debt and Debt Payback**



b - Budget, f - Forecast  
Source: State of Berlin, Fitch

**Good Cash Management**

Sound liquidity management and predictable cash flow planning are essential components of the Laender’s ‘AAA’ long-term ratings. Like all Laender, Berlin has very good access to short-term liquidity from commercial banks, the Bund and the other Laender. It therefore aims to limit cash in its accounts and often acts as a lender when it receives large tax revenues rather than keeping the excess liquidity in its accounts to buffer maturing debt.

**Contingent Liabilities**

At end-2016, Berlin’s guarantees amounted to EUR5.9 billion (end-2015: EUR6.9 billion). The largest such guarantee related to the Bankgesellschaft Berlin (BGB) real estate transaction. Of this guarantee, EUR1,998 million was outstanding at end-2016. Following ongoing redemption payments, the remaining risk will decline further over time.

The second-largest issued guarantee relates to the debt of social housing associations, which also declined and amounted to EUR1.9 billion at end-2016 (2015: EUR2.1 billion). However, the servicing of social housing associations’ debt is fully self-supported through rents and sales of flats, which mitigates the risk for Berlin’s budget. Another issued guarantee amounting to EUR1.1 billion is on behalf of the former BWB Rekom GmbH (merged with Berlinwasser Holding in 2015), according to §3 Abs.10 of the state budget code for the re-municipalisation of Berliner Wasserbetriebe.

Fitch assumes risk stemming from these guarantees to be limited; gross payments on behalf of these guarantees were fully covered by fees and Berlin gained a net surplus of EUR10.2 million in 2016. So far, Berlin faces net payments of EUR12 million in 2017.

**Shareholdings**

At end-2016, Berlin had 56 shareholdings (41 majority-owned) whose consolidated debt outstanding amounted to EUR15.6 billion. They received EUR823 million of subsidies in 2016. The entire surplus of its shareholdings amounted to EUR708 million at end-2016.

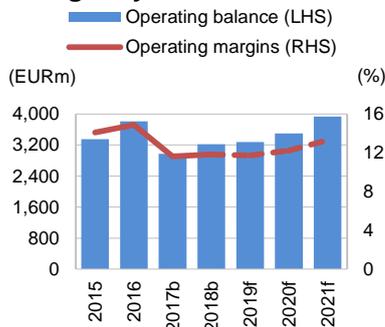
This debt does not include the liabilities of fully-owned development bank Investitionsbank Berlin of EUR16.7 billion. Fitch assumes the business profile of the bank to be conservative, and large parts of its assets are covered by real estate assets or lending to the municipal sector. The bulk of public-sector entities’ debt belongs to the main housing companies (EUR8.5 billion), Berliner Wasserbetriebe AoER (EUR3.6 billion), BVG (public transport; EUR693 million) and Berliner Stadtreinigungsbetriebe (the local waste company; EUR144 million).

Berlin has a 37% share in the new Berlin-Brandenburg airport, with the state of Brandenburg also holding a 37% share and the Bund holding the remaining 26%. The airport still faces problems because of a delay in its completion resulting in a significant project cost rise; as result, the shareholders need to provide several contributions. The city has provided further subsidies for the construction of the airport, amounting to EUR165 million in 2016; the city expects to provide additional subsidies of EUR307 million to 2018. At end-2016, the entire debt amounted to EUR2.5 billion. Fitch expects debt to increase further, as the opening date for the new airport is not certain.

**High Pension Liabilities**

Berlin is liable for pension payments to its civil servants. According to the state, pension payments to its public employees amounted to EUR1.58 billion in 2016 and EUR1.66 billion is envisaged for 2017 (2018: EUR1.75 billion). Based on the next 10 years’ expected average annual pension payments and considering a payout period of 20 years for active staff, Berlin has estimated its pension liabilities at about EUR36 billion (excluding adjustments and deduction of accrued interest). Berlin expects its retirees to peak at 70,960 in 2031 (2016: 58,734). Berlin only provides mandatory payments to the pension contribution plan (Sondervermoegeen “Versorgungsruecklage des Landes Berlin”). These contributions totalled EUR831 million at end-2016 (market value) and are expected to increase to EUR1.1 billion by 2019.

**Budgetary Performance**



b - Budget, f - Forecast  
Source: State of Berlin, Fitch

Neither the pension liabilities, which would normally be considered as other Fitch-classified debt, nor the contingent liabilities stemming from Berlin’s development bank are reflected in the guarantees and other contingent liabilities listed in *Appendix A*.

**Fiscal Performance**

**Operating Revenue**

Berlin’s operating performance improved slightly in 2016, with an operating margin of 14.9% (2015: 14.1%). According to the medium-term financial plan, the operating margin is expected to oscillate between 11.6% and 11.8% in 2017-2018. However, we expect Berlin’s results to be close to these of 2016 and based on 3Q17 results, the operating margin was 16.2%, well above Berlin’s budget.

Berlin expects operating revenue to grow by between 2.4% and 6.4% annually in 2017-2021. Fitch expects this growth to be achieved, as the most recent tax estimate as of November 2017 forecasts the taxes of the Laender to increase by between 2.9% and 5.1% annually over the same period. Taxes accounted for about 58% of operating revenues in 2016; an additional 35% comprised transfers received. As these transfers are largely correlated to the tax proceeds achieved in Germany as a whole, the tax estimate provides a reliable proxy for the operating revenues of Berlin in particular.

According to the medium-term financial plan of Berlin, the expected decline in its operating margin will not result in a deficit before debt variation in 2017-2021. Growth of the current surplus, driven by a strong tax increase ranging between 4.5% in 2017 and 8.9% in 2021, and moderate growth of interest expenses covering the growth of capital expenditure (see *Capital Expenditure* below) helps to keep the surplus before debt variation above 1.6%; therefore, Berlin should remain on track to further slightly reduce debt ahead of the debt brake’s introduction in 2020.

**Tax Revenue<sup>a</sup>**

| (EURm)                   | 2012          | 2013          | 2014          | 2015          | 2016          |
|--------------------------|---------------|---------------|---------------|---------------|---------------|
| Income and corporate tax | 3,532         | 3,943         | 4,130         | 4,638         | 4,880         |
| VAT                      | 3,962         | 3,453         | 3,658         | 3,612         | 4,192         |
| State taxes              | 856           | 1,028         | 1,087         | 1,565         | 1,587         |
| Municipal taxes          | 3,261         | 3,497         | 3,533         | 3,811         | 4,106         |
| <b>Total</b>             | <b>11,611</b> | <b>11,921</b> | <b>12,408</b> | <b>13,626</b> | <b>14,765</b> |

<sup>a</sup> Does not contain all taxes that are included in “Taxes” in *Appendix A*  
Source: State of Berlin

**Operating Expenditure**

Operating expenditure is driven by personnel costs and transfers, which together accounted for about 67% of Berlin’s operating expenditure in 2016. Limiting these cost items will be key to maintaining the current fiscal performance, even in times of weaker operating revenues. The above-German average growth of its population and an increasing number of immigrants require additional staff and expansion of Berlin’s administration and local infrastructure. Growth of operating spending is therefore close to growth of revenue in 2017-2021, resulting in a declining operating margin. However, in 2015 and 2016, operating performance was driven by a strong growth of tax revenues, which we expect to continue at least in 2017 and 2018.

**Operating Expenditure**

| (EURm)                             | 2015            | 2016            | 2017 <sup>a</sup> | % change, 2016-2017 <sup>a</sup> |
|------------------------------------|-----------------|-----------------|-------------------|----------------------------------|
| Personnel costs                    | 7,487.1         | 7,807.2         | 8,282.0           | 6.1                              |
| Goods and services                 | 6,311.4         | 7,152.6         | 7,132.0           | -0.3                             |
| Current transfers made             | 6,646.4         | 6,873.2         | 7,155.0           | 4.1                              |
| Other opex                         | 0.0             | 0.0             | 0.0               | 0.0                              |
| <b>Total operating expenditure</b> | <b>20,444.9</b> | <b>21,833.0</b> | <b>22,569.0</b>   | <b>3.4</b>                       |

<sup>a</sup> Budget  
Source: State of Berlin

**GDP<sup>a</sup> Per Capita of the Laender, 2015**

| Land                          | (EUR)         |
|-------------------------------|---------------|
| Hamburg                       | 60,912        |
| Bremen                        | 46,755        |
| Bavaria                       | 42,950        |
| Hessen                        | 42,732        |
| Baden-Wuerttemberg            | 42,623        |
| North Rhine-Westphalia        | 36,544        |
| <b>Berlin</b>                 | <b>35,428</b> |
| Saarland                      | 34,893        |
| Rhineland-Palatinate          | 33,589        |
| Lower Saxony                  | 32,591        |
| Schleswig-Holstein            | 30,482        |
| Saxony                        | 27,899        |
| Thuringia                     | 27,172        |
| Brandenburg                   | 26,848        |
| Saxony-Anhalt                 | 25,828        |
| Mecklenburg-Western Pomerania | 25,025        |
| <b>Germany</b>                | <b>37,128</b> |

<sup>a</sup> At current prices  
Source: VGR der Laender

**Economic Structure of Berlin, 2016**

| Sector (as % of GVA)                    | Berlin            | Germany    |
|---|-------------------|------------|
| Agriculture and forestry                | <0.0 <sup>a</sup> | 0.6        |
| Production                              | 15.4              | 30.5       |
| Services                                | 84.6              | 68.9       |
| <b>Inhabitants per square kilometre</b> | <b>3,948</b>      | <b>230</b> |

<sup>a</sup> 0.004%  
Source: State of Berlin, Arbeitskreis "Erwerbstaetigenrechnung des Bundes und der Laender", Statistical Office Berlin-Brandenburg

**Unemployment Rates**

|         | 2014 | 2015 | 2016 | 11/17 |
|---------|------|------|------|-------|
| Germany | 6.7  | 6.4  | 6.1  | 5.3   |
| West    | 5.9  | 5.7  | 5.6  | 4.9   |
| East    | 9.8  | 9.2  | 8.5  | 7.0   |
| Berlin  | 11.1 | 10.7 | 9.8  | 8.5   |

Source: Arbeitsagentur, Fitch

**State of Berlin: Parliament**

| Party            | Seats      |
|------------------|------------|
| SPD              | 38         |
| CDU              | 31         |
| Green Party      | 27         |
| Left Party       | 27         |
| AfD <sup>a</sup> | 25         |
| FDP <sup>b</sup> | 12         |
| <b>Germany</b>   | <b>160</b> |

<sup>a</sup> Alternative for Germany  
<sup>b</sup> Liberal Party  
Source: State of Berlin

**Capital Expenditure**

Capital expenditure amounted to EUR2.9 billion in 2016, well above the capex realised in 2015 (EUR2.4 billion) and its 2016 budget (EUR1.9 billion). This was driven by an established programme called SIWA (Sondervermoegeen Investitionen in die Wachsende Stadt), which came into effect in 2015. The law that established SIWA was changed; from January 2017 SIWA became SIWANA (Sondervermoegeen Infrastruktur der Wachsenden Stadt und Nachhaltigkeitsfonds). SIWA was a special fund for investments in light of the city's growth. The initial SIWA law essentially stipulated that surpluses over EUR80 million would be used in equal shares (50/50) for the repayment of debt and the funding of SIWA.

Now, under SIWANA, only a minimum of EUR80 million of repayment of debt is required, and any remaining surpluses can be used either for the repayment of debt or to fund SIWANA. This is under the full discretion of the Parliament upon proposal by the Senate. However, the full discretion of the Parliament is limited, as Berlin's structural deficit is obliged to remain within its set limits. The size of the sustainability fund (a separate compartment within the SIWANA fund) is determined as 1% of the annual budget, starting at the earliest in 2019, to compensate for unexpected revenue shortfalls, acting as a discretionary stabilisation mechanism, in case a structurally balanced budget cannot be achieved by other means.

Berlin's population growth and its already constrained property market require the city to further invest and expand its local infrastructure, as well as to create new homes. Its six main housing companies held 319,000 housing units at end-June 2017 and Berlin aims to increase these units by 41,000, to 360,000 units in 2021 and 400,000 in 2026, via its housing companies. After limiting its annual investments to EUR1.4 billion until 2014, Berlin envisages investments between EUR2 billion in 2017 and EUR2.5 billion in 2021, corresponding to 6% to 8% of its total expenditure in the same period, from relatively low 4% to 5% in 2012-2014 and more in line with 2015 (7.4%) and 2016 (5.9%).

**Economy**

**Demography, GDP and Employment Market**

Berlin is the capital of Germany and by far the largest city in the country. Based on the population census for 2011, Berlin had a population of 3.52 million at end-2015. Berlin remains an attractive destination and has seen its population steadily increase due to net immigration. According to own estimates, Berlin expects its population to grow by 180,000 people until 2030.

Berlin's GDP grew by 2.7% yoy to EUR129.5 billion in real terms in 2016, well above Germany's growth rate of 1.9%. However, in 1H17, Berlin's growth in real terms of 1.6% was slightly below that of Germany (2.0%). Driven by a broad services sector concentrated in – among other things – public services, the city's economy is less volatile than that of other German states, but still has a below-average wealth level. Berlin's GDP per capita grew by 33% over the past 10 years, more than that of Germany (28%), but its GDP per capita of EUR35,428 (2015) is still 4.6% below the average GDP of Germany.

The unemployment rate in Berlin was 8.5% in November 2017. Despite a significant decline in unemployment since 2009, the state (together with Bremen) still has the highest unemployment rate among German states. Berlin will probably maintain relatively high unemployment compared to the German average. As a capital city, Berlin attracts jobseekers, many of whom find employment. However, given the large number of highly skilled people moving to Berlin, reducing structural unemployment will prove challenging.

**Management and Administration**

At the 18 September 2016 elections, the Social Democrats (SPD) remained the strongest party, with 38 of the parliament's 160 seats. Michael Mueller remains the mayor and formed the first coalition between the SPD, Left Party and Green Party, which is led by the SPD. The next elections will take place in autumn 2021.

To comply with the debt brake and the requirements of the Stability Board, Berlin established a consolidation strategy including a strict limit on expenditure growth. After the successful consolidation of its budget and sustainable budgetary surpluses, as well as the increasing demand for public services following a growing population, this strategy was adjusted. Based on balanced budgets, expenditure growth is strictly capped to the growth rate of revenues ensuring to maintain a budget surplus.

Appendix A

| <b>State of Berlin</b>                                       |                 |                 |                 |                 |                 |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|
| <b>(EURm)</b>  | <b>2012</b>     | <b>2013</b>     | <b>2014</b>     | <b>2015</b>     | <b>2016</b>     |
| Taxes  | 11,635.9        | 11,946.0        | 13,149.3        | 13,652.7        | 14,789.5        |
| Transfers received   | 8,424.0         | 8,376.1         | 8,203.0         | 8,526.2         | 8,901.1         |
| Fees, fines and other operating revenue                      | 1,469.5         | 1,473.1         | 1,557.0         | 1,612.1         | 1,952.2         |
| <b>Operating revenue</b>                                     | <b>21,529.4</b> | <b>21,795.2</b> | <b>22,909.3</b> | <b>23,791.0</b> | <b>25,642.8</b> |
| Operating expenditure  | -18,379.3       | -18,799.5       | -19,746.9       | -20,444.9       | -21,833.0       |
| <b>Operating balance</b>                                     | <b>3,150.1</b>  | <b>2,995.7</b>  | <b>3,162.4</b>  | <b>3,346.1</b>  | <b>3,809.8</b>  |
| Financial revenue  | 26.6            | 24.3            | 18.6            | 18.5            | 18.2            |
| Interest paid  | -2,096.8        | -1,921.0        | -1,759.0        | -1,606.6        | -1,384.5        |
| <b>Current balance</b>                                       | <b>1,079.9</b>  | <b>1,099.0</b>  | <b>1,422.0</b>  | <b>1,758.0</b>  | <b>2,443.5</b>  |
| Capital revenue  | 1,012.1         | 927.5           | 892.5           | 898.9           | 859.1           |
| Capital expenditure  | -1,377.3        | -1,265.3        | -1,406.3        | -2,429.8        | -2,912.7        |
| <b>Capital balance</b>                                       | <b>-365.2</b>   | <b>-337.8</b>   | <b>-513.8</b>   | <b>-1,530.9</b> | <b>-2,053.6</b> |
| <b>Surplus (deficit) before debt variation</b>               | <b>714.7</b>    | <b>761.2</b>    | <b>908.2</b>    | <b>227.1</b>    | <b>389.9</b>    |
| New borrowing  | 7,819.7         | 7,383.9         | 8,063.9         | 7,136.3         | 7,039.1         |
| Debt repayment   | -8,053.9        | -7,871.5        | -8,457.1        | -8,350.3        | -7,254.1        |
| <b>Net debt movement</b>                                     | <b>-234.2</b>   | <b>-487.6</b>   | <b>-393.2</b>   | <b>-1,214.0</b> | <b>-215.0</b>   |
| <b>Overall results</b>                                       | <b>480.5</b>    | <b>273.6</b>    | <b>515.0</b>    | <b>-986.9</b>   | <b>174.9</b>    |
| <b>Debt</b>  |                 |                 |                 |                 |                 |
| Short-term   | 0.0             | 138.0           | 0.0             | 509.9           | 113.9           |
| Long-term  | 62,255.9        | 61,607.1        | 60,804.2        | 59,905.6        | 59,436.4        |
| <b>Direct debt</b>   | <b>62,255.9</b> | <b>61,745.1</b> | <b>60,804.2</b> | <b>60,415.5</b> | <b>59,550.3</b> |
| + Other Fitch classified debt - pre-financing                | -               | -               | -               | -               | -               |
| <b>Direct risk</b>   | <b>62,255.9</b> | <b>61,745.1</b> | <b>60,804.2</b> | <b>60,415.5</b> | <b>59,550.3</b> |
| - Cash, liquid deposits, sinking fund                        | -               | -               | -               | -               | -               |
| <b>Net direct risk</b>                                       | <b>62,255.9</b> | <b>61,745.1</b> | <b>60,804.2</b> | <b>60,415.5</b> | <b>59,550.3</b> |
| Guarantees and other contingent liabilities                  | 8,776.4         | 8,889.6         | 7,510.4         | 6,900.8         | 5,928.3         |
| Net Indirect debt (public sector entities exc. gteed amount) | 11,800.0        | 12,427.0        | 15,064.3        | 15,183.0        | 15,563.0        |
| <b>Net overall risk</b>                                      | <b>82,832.3</b> | <b>83,061.7</b> | <b>83,378.9</b> | <b>82,499.3</b> | <b>81,041.6</b> |
| <b>Memo for direct debt</b>                                  |                 |                 |                 |                 |                 |
| % in foreign currency  | 1.0             | 0.7             | 0.4             | 0.4             | 0.4             |
| % issued debt  | 100.0           | 99.8            | 100.0           | 99.2            | 99.8            |
| % fixed interest rate debt                                   | 75.6            | 85.3            | 86.6            | 87.0            | 89.7            |

Source: Issuer and Fitch calculations

Appendix B

State of Berlin

|  | 2012    | 2013   | 2014   | 2015   | 2016   |
|--|---------|--------|--------|--------|--------|
| <b>Fiscal performance ratios</b>                                       |         |        |        |        |        |
| Operating balance/operating revenue (%)                                | 14.63   | 13.74  | 13.8   | 14.06  | 14.86  |
| Current balance/current revenue <sup>a</sup> (%)                       | 5.01    | 5.04   | 6.2    | 7.38   | 9.52   |
| Surplus (deficit) before debt variation/total revenue <sup>b</sup> (%) | 3.17    | 3.35   | 3.81   | 0.92   | 1.47   |
| Overall results/total revenue (%)                                      | 2.13    | 1.2    | 2.16   | -3.99  | 0.66   |
| Operating revenue growth (annual % change)                             | 9.01    | 1.23   | 5.11   | 3.85   | 7.78   |
| Operating expenditure growth (annual % change)                         | 1.49    | 2.29   | 5.04   | 3.53   | 6.79   |
| Current balance growth (annual % change)                               | -296.20 | 1.77   | 29.39  | 23.63  | 38.99  |
| <b>Debt ratios</b>   |         |        |        |        |        |
| Direct debt growth (annual % change)                                   | -1.05   | -0.82  | -1.52  | -0.64  | -3.71  |
| Interest paid/operating revenue (%)                                    | 9.74    | 8.81   | 7.68   | 6.75   | 5.4    |
| Operating balance/interest paid (x)                                    | 1.5     | 1.6    | 1.8    | 2.1    | 2.8    |
| Direct debt servicing/current revenue (%)                              | 47.09   | 44.88  | 44.56  | 41.82  | 33.66  |
| Direct debt servicing/operating balance (%)                            | 322.23  | 326.89 | 323.05 | 297.57 | 226.75 |
| Direct debt/current revenue (%)  | 288.81  | 282.98 | 265.2  | 253.75 | 232.07 |
| Direct risk/current revenue (%)  | 288.81  | 282.98 | 265.2  | 253.75 | 232.07 |
| Direct debt/current balance (years)                                    | 57.65   | 56.18  | 42.76  | 34.37  | 24.37  |
| Net overall risk/current revenue (%)                                   | 384.27  | 380.68 | 363.66 | 346.5  | 315.82 |
| Direct risk/current balance (years)                                    | 57.65   | 56.18  | 42.76  | 34.37  | 24.37  |
| Direct debt/GDP (%)  | 56.69   | 54.74  | 51.64  | 48.66  | 44.94  |
| Direct debt per capita (EUR)   | 18,528  | 18,295 | 17,523 | 17,164 | 16,918 |
| <b>Revenue ratios</b>  |         |        |        |        |        |
| Operating revenue/budget operating revenue (%)                         | 105.29  | 102.73 | 102.84 | 103.48 | 105.06 |
| Tax revenue/operating revenue (%)                                      | 54.05   | 54.81  | 57.4   | 57.39  | 57.68  |
| Modifiable tax revenue/total tax revenue (%)                           | -       | -      | -      | -      | -      |
| Current transfers received/operating revenue (%)                       | 39.13   | 38.43  | 35.81  | 35.84  | 34.71  |
| Operating revenue/total revenue <sup>b</sup> (%)                       | 95.4    | 95.82  | 96.18  | 96.29  | 96.69  |
| Total revenue <sup>b</sup> per capita (EUR)                            | 6,717   | 6,740  | 6,865  | 7,019  | 7,534  |
| <b>Expenditure ratios</b>  |         |        |        |        |        |
| Operating expenditure/budget operating expenditure (%)                 | 100.26  | 101.17 | 102.7  | 104.94 | 101.76 |
| Staff expenditure/operating expenditure (%)                            | 36.78   | 36.9   | 36.5   | 36.62  | 35.76  |
| Current transfer made/operating expenditure (%)                        | 34.12   | 33.25  | 33.24  | 32.51  | 31.48  |
| Capital expenditure/budget capital expenditure (%)                     | 83.88   | 80.7   | 89.74  | 120.47 | 153.46 |
| Capital expenditure/total expenditure (%)                              | 4.61    | 4.24   | 4.48   | 7.4    | 8.72   |
| Capital expenditure/local GDP (%)                                      | 1.25    | 1.12   | 1.19   | 1.96   | 2.25   |
| Total expenditure per capita (EUR)                                     | 8,901   | 8,847  | 9,040  | 9,327  | 9,484  |
| <b>Capital expenditure financing</b>                                   |         |        |        |        |        |
| Current balance/capital expenditure (%)                                | 78.41   | 86.86  | 101.12 | 72.35  | 83.89  |
| Capital revenue/capital expenditure (%)                                | 73.48   | 73.3   | 63.46  | 36.99  | 29.49  |
| Net debt movement/capital expenditure (%)                              | -17     | -38.54 | -27.96 | -49.96 | -7.38  |

n.a.: Not available

<sup>a</sup> Includes financial revenue

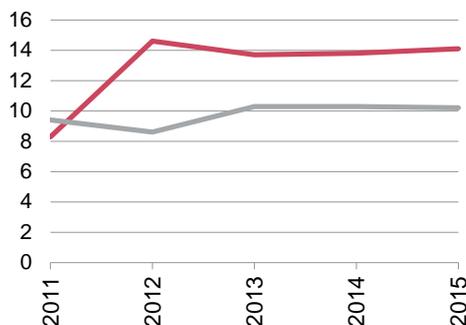
<sup>b</sup> Excluding new borrowing

Source: Issuer and Fitch calculations

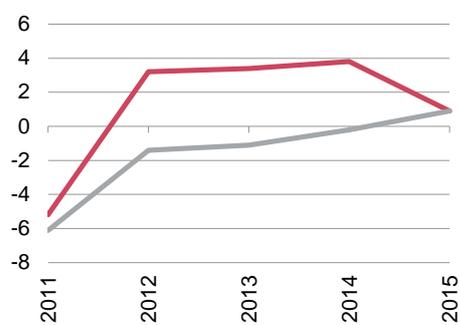
## Appendix C State of Berlin

### Peer Comparison

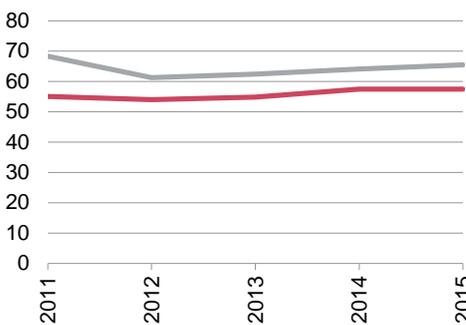
**Operating Balance**  
% Operating Revenue



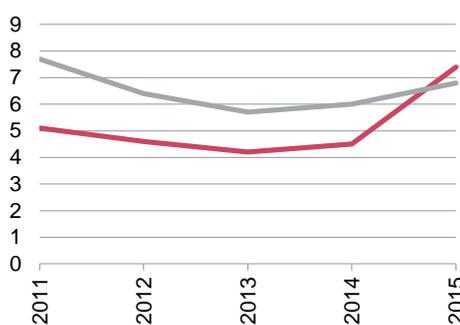
**Surplus (Deficit)**  
% Total Revenue



**Taxes**  
% Operating Revenue



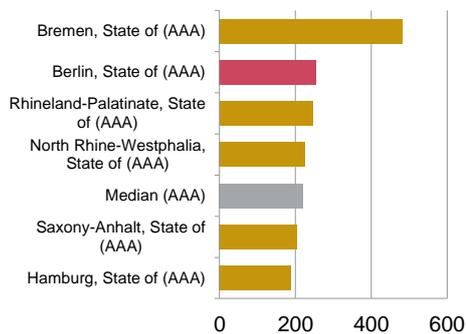
**Capital Expenditure**  
% Total Expenditure



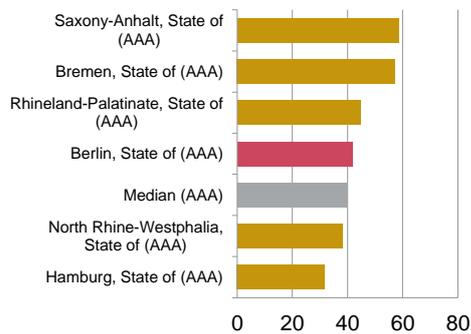
— State of Berlin

— AAA Peer Group Median

**Debt**  
To Current Revenue (%) 2015



**Debt Servicing**  
To Current Revenue (%) 2015



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