



Global Investment Research

The Goldman Sachs Group, Inc.

The Private Sector Financial Balance As a Predictor of Financial Crises

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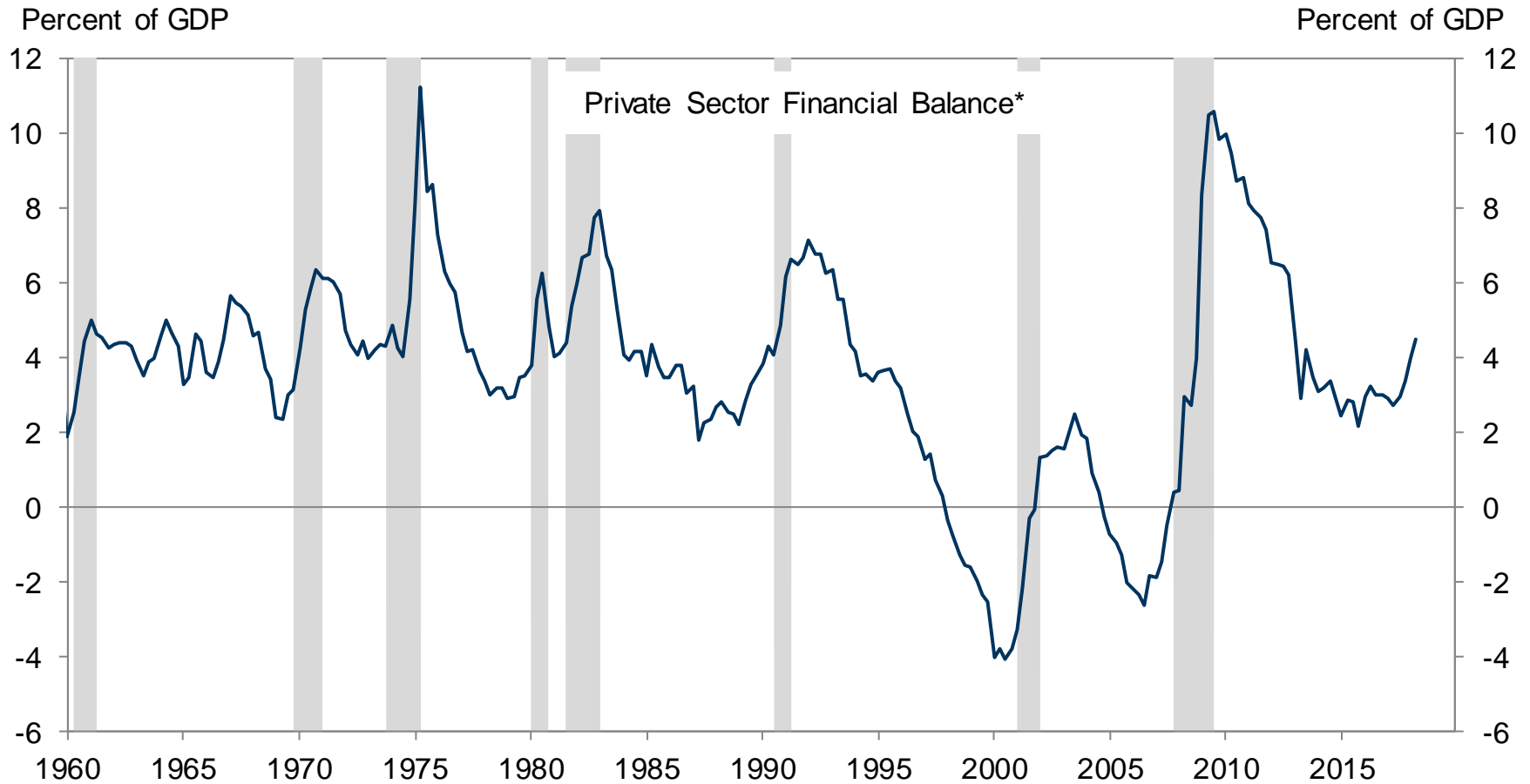
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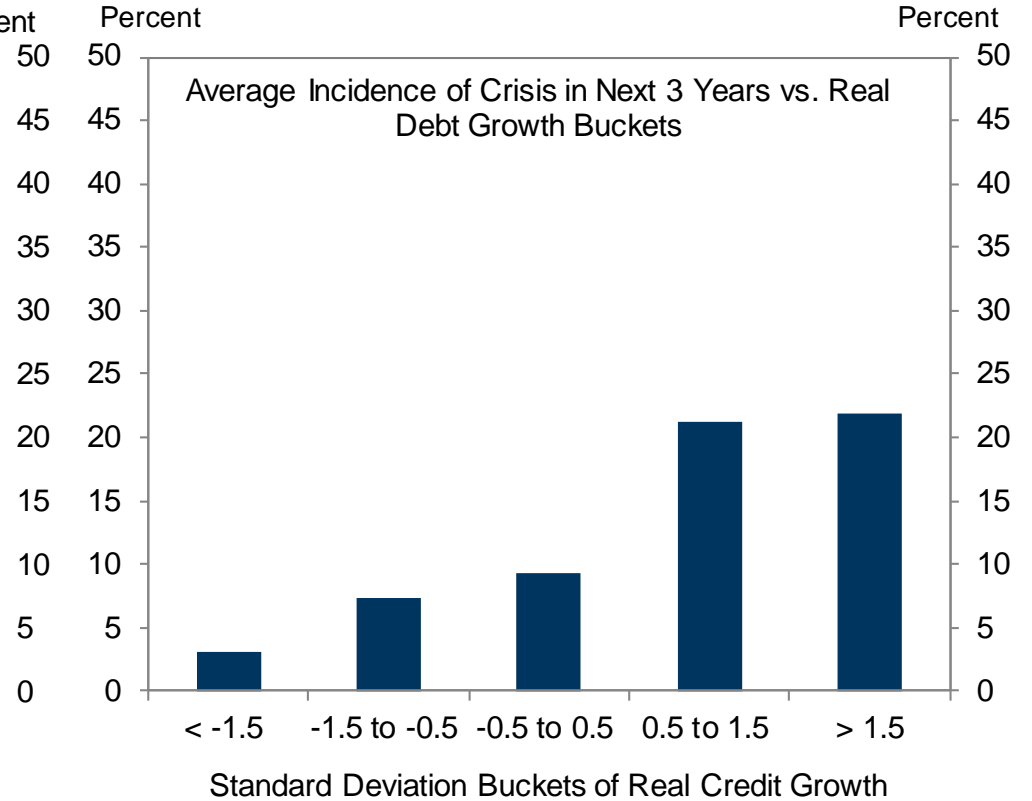
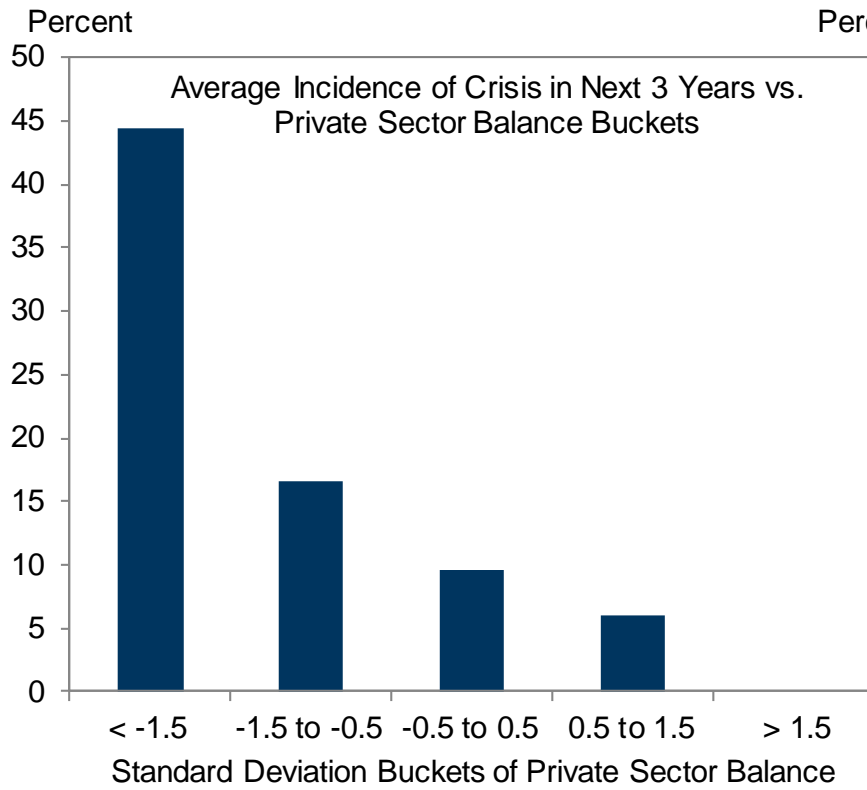
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US Private Sector Financial Balance



* Total income minus total spending or, alternatively, total saving minus total investment, all households and businesses.

Incidence of Crisis in Next 3 Years: Private Sector Balance Buckets vs. Debt Growth Buckets



Source: Macroeconomy Database, Haver Analytics, Goldman Sachs Global Investment Research

Private Sector Balance Outperforms Debt Growth as a Predictor of Financial Crisis

Logit Panel Regression for 1985-2016

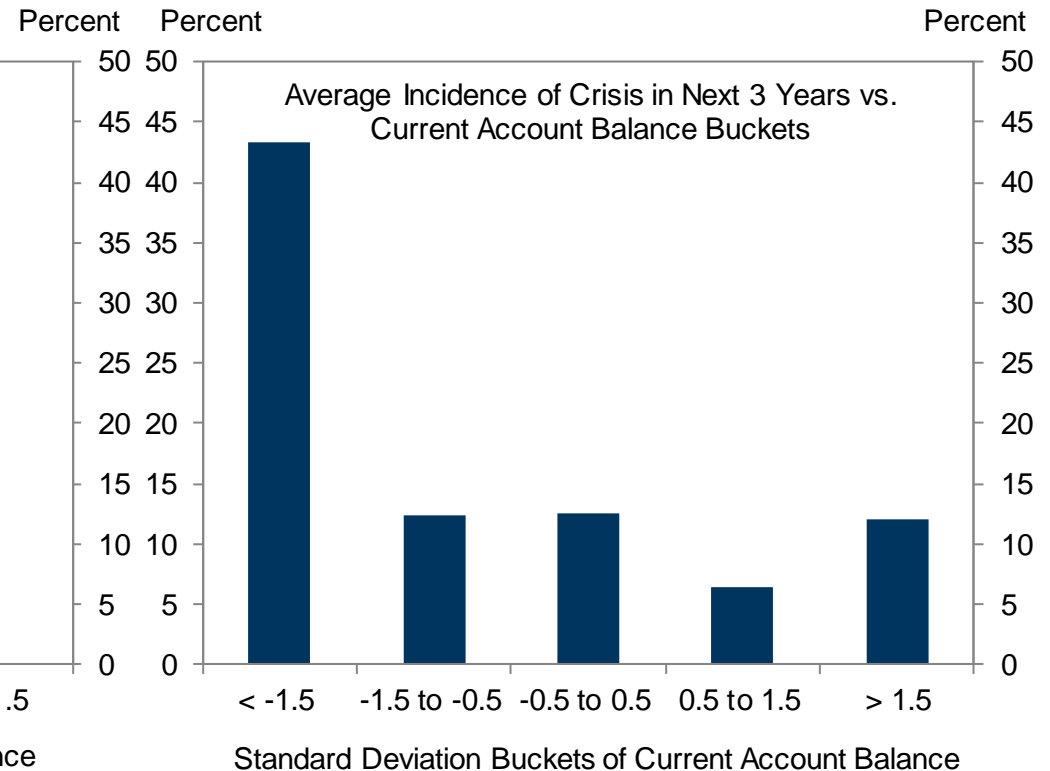
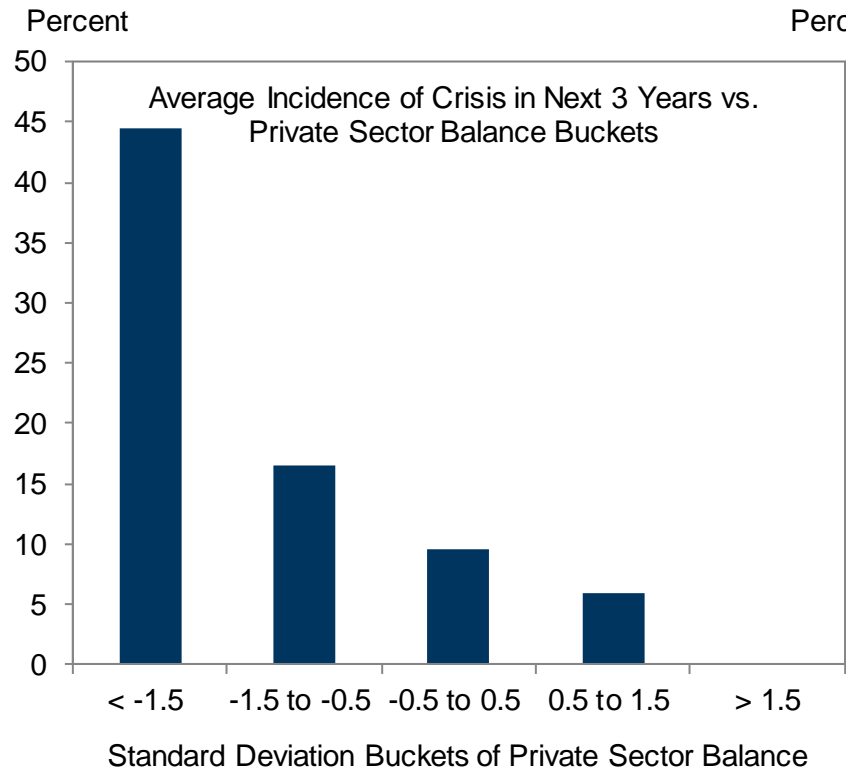
Dependent variable: Three year ahead alarm for financial crisis

| | | | | | | |
|--------------------------------------|---------------------------------|-------------------------------|---------------------------------|---------------------------------|-------------------------------|---------------------------------|
| Private sector balance (% of GDP) | -0.272*** <i>-6.1</i> | | -0.226*** <i>-4.1</i> | -0.175*** <i>-3.8</i> | | -0.204*** <i>-3.5</i> |
| Real credit growth, 4y % change | | 0.058*** <i>5.6</i> | 0.022* <i>1.7</i> | | 0.011 <i>0.8</i> | -0.021 <i>-1.3</i> |
| Real house price growth, 4y % change | | | | 0.053*** <i>4.5</i> | 0.061*** <i>4.4</i> | 0.061*** <i>4.1</i> |
| Real equity growth, 4y % change | | | | 0.005 <i>1.3</i> | 0.008** <i>2.3</i> | 0.006 <i>1.5</i> |
| Observations | 486 | 486 | 486 | 486 | 486 | 486 |
| Pseudo R ² | 0.16 | 0.11 | 0.17 | 0.23 | 0.19 | 0.23 |

Note: We use robust standard errors.

*Figures in italics denote t-statistics, and stars denote significance (***) $p < 0.01$, ** $p < 0.05$, * $p < 0.1$).*

Incidence of Crisis in Next 3 Years: Private Sector Balance Buckets vs. Current Account Buckets



Source: Macroeconomic Database, Haver Analytics, Goldman Sachs Global Investment Research



Private Sector Balance Outperforms Current Account as a Predictor of Financial Crisis

Logit Panel Regression for 1985-2016
Dependent variable: Three year ahead alarm for financial crisis

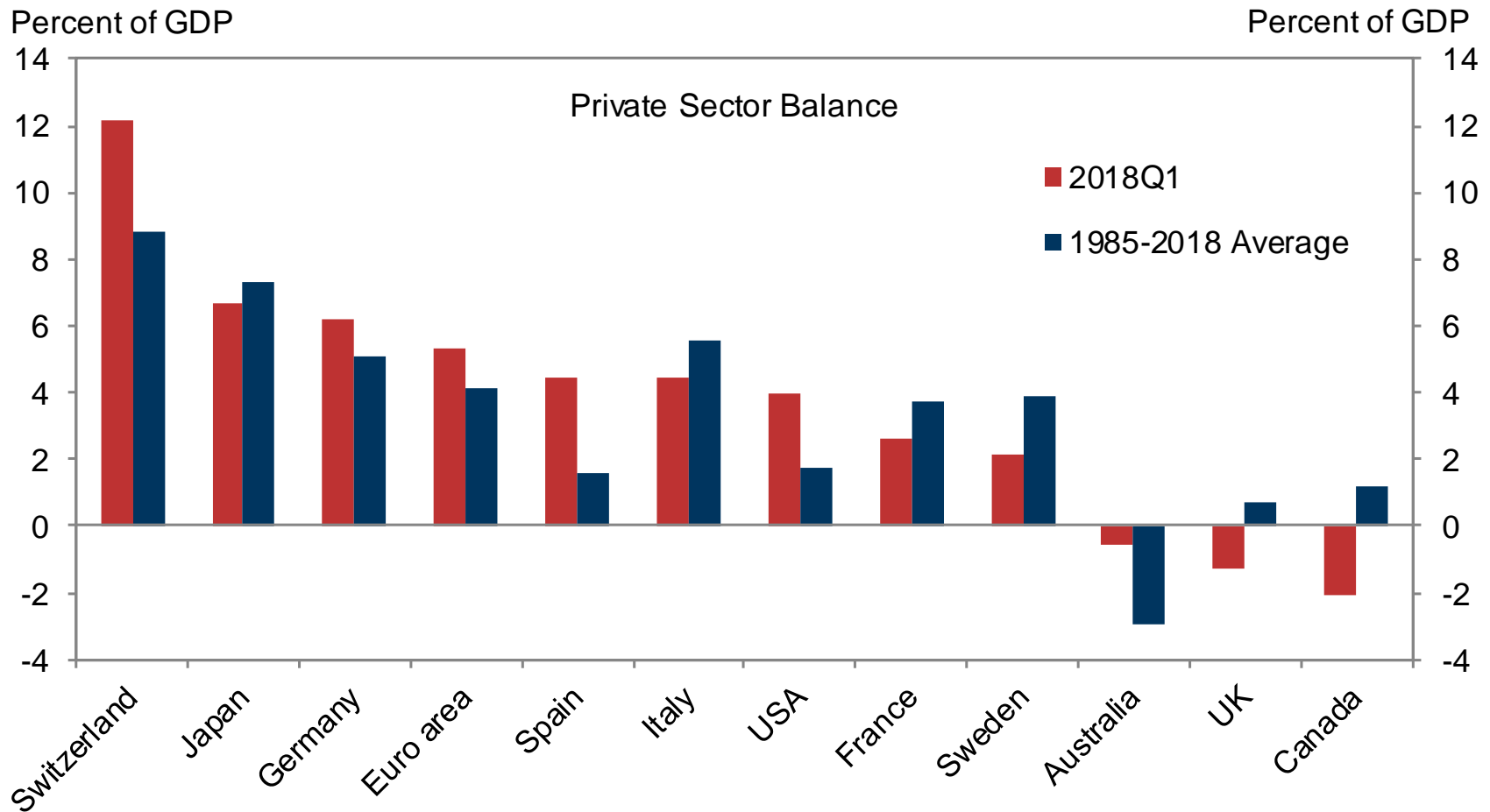
| | | | | | | |
|--------------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Private sector balance (% of GDP) | -0.272*** <i>-6.1</i> | | -0.321*** <i>-5.2</i> | -0.175*** <i>-3.8</i> | | -0.177*** <i>-2.6</i> |
| Current account balance (% of GDP) | | -0.185*** <i>-3.1</i> | 0.084 <i>1.7</i> | | -0.141*** <i>-2.7</i> | 0.004 <i>0.1</i> |
| Real house price growth, 4y % change | | | | 0.053*** <i>4.5</i> | 0.062*** <i>5.4</i> | 0.053*** <i>4.4</i> |
| Real equity growth, 4y % change | | | | 0.005 <i>1.3</i> | 0.009** <i>2.4</i> | 0.005 <i>1.2</i> |
| Observations | 486 | 486 | 486 | 486 | 486 | 486 |
| Pseudo R ² | 0.16 | 0.07 | 0.16 | 0.23 | 0.21 | 0.23 |

Note: We use robust standard errors.

*Figures in italics denote t-statistics, and stars denote significance (***) p<0.01, ** p<0.05, * p<0.1).*

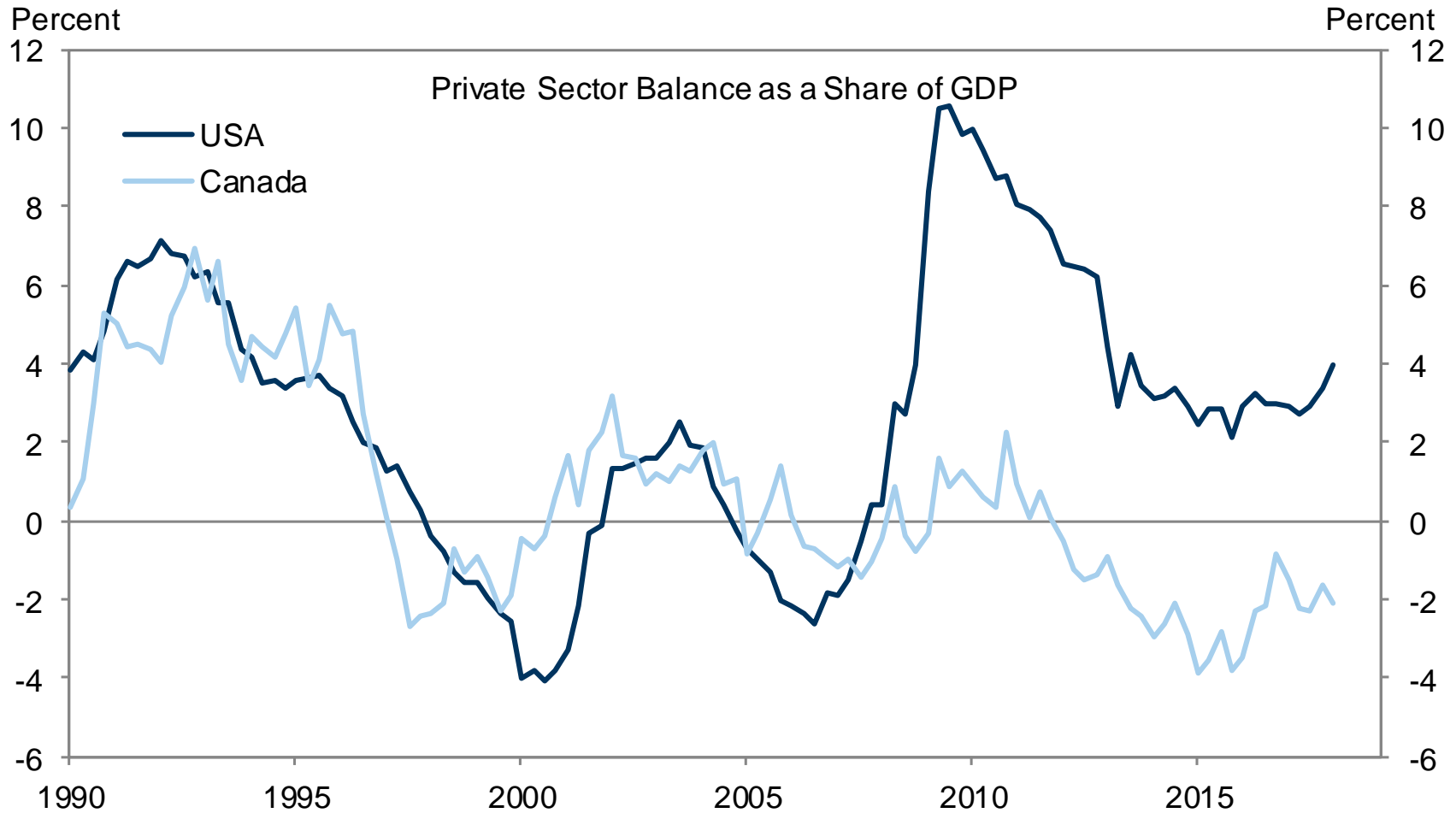
Source: Goldman Sachs Global Investment Research

Private Sector Balance Looks Encouraging in the Biggest DM Economies



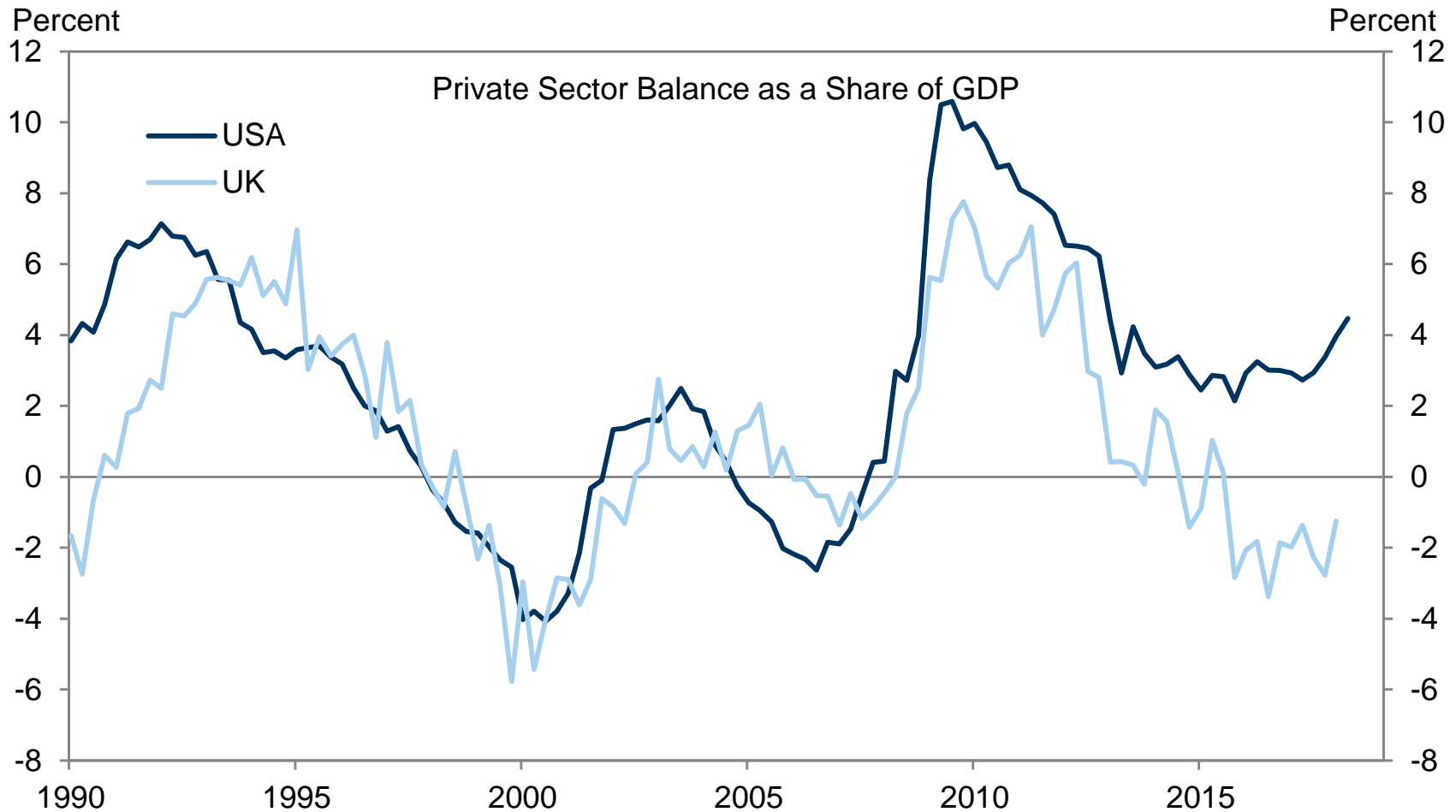
Source: Haver Analytics, Goldman Sachs Global Investment Research

A Sizable Deficit in Canada, Especially Relative to the United States



Source: Haver Analytics, Goldman Sachs Global Investment Research

Private Sector Deficit in the UK Reinforces Concerns on the Eve of Brexit



Source: Haver Analytics, Goldman Sachs Global Investment Research

Disclosure Appendix

August 27, 2018

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