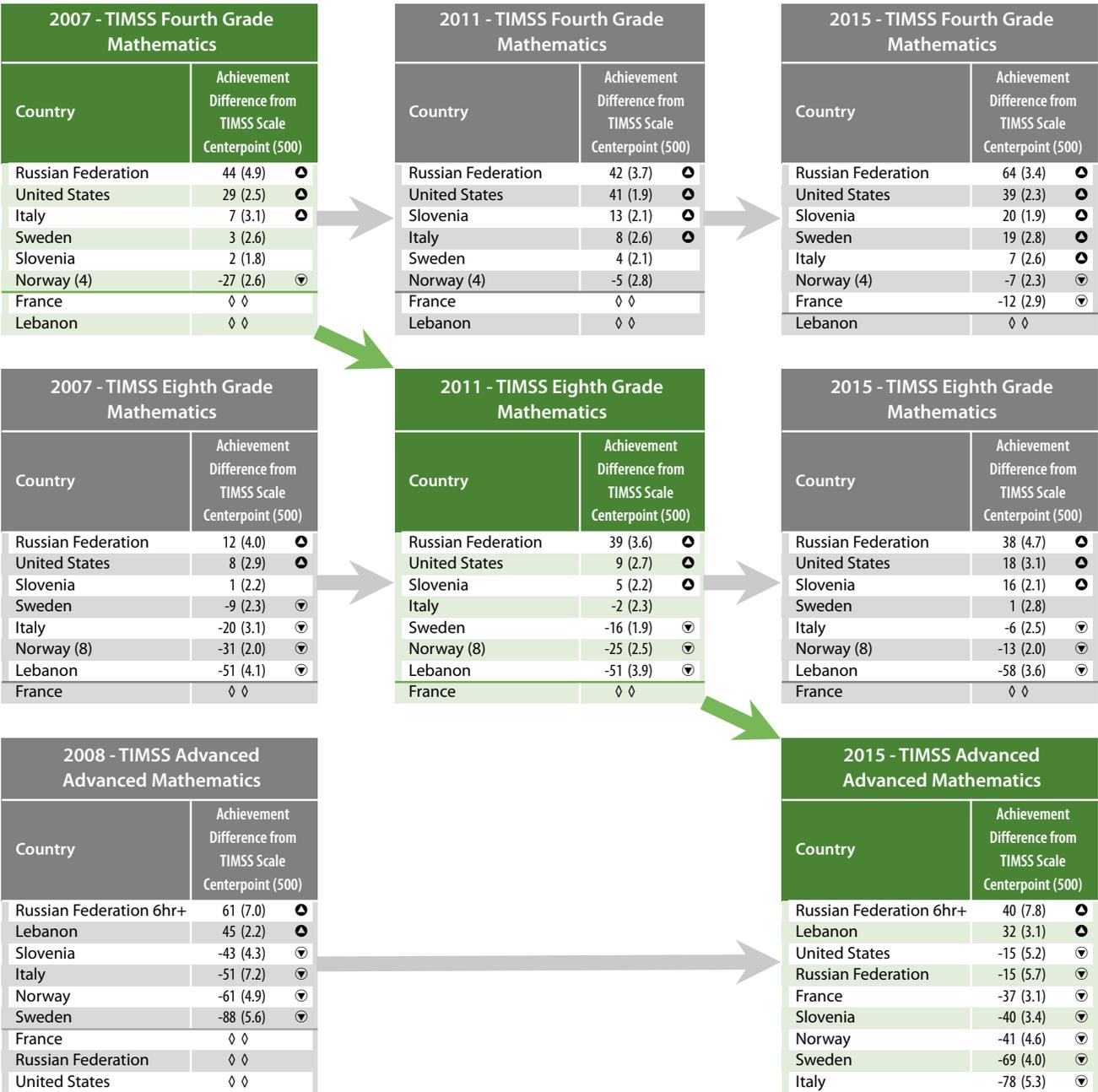


**Exhibit M1.5: Relative Achievement of 2015 Advanced Mathematics Cohort at the Eighth and Fourth Grades\***

Instructions: To compare relative achievement across grades as the cohort of students assessed at the fourth grade in 2007 moved to eighth grade four years later in 2011 and then to TIMSS Advanced in 2015, start in the upper-left hand panel and follow the darker green arrows pointing diagonally downwards.



SOURCE: IEA's Trends in International Mathematics and Science Study - TIMSS Advanced 2015

- ▲ Country average significantly higher than the centerpoint of the TIMSS scale
- ▼ Country average significantly lower than the centerpoint of the TIMSS scale
- ◊ Country did not participate in this year's assessment

The Russian Federation 6hr+ results are for a subset of the Russian Federation students. This subset of students are in an Intensive stream that have at least 6 hours of mathematics lessons per week.

Russian Federation trend results are available only for the Intensive stream students (6hr+). The United States adjusted the 1995 sample to correspond with the course-taking definitions used in 2015, and the 1995 results were recomputed.

A diamond (◊) indicates the country did not participate in this year's assessment.

( ) Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.

\* TIMSS 2007 data from: *TIMSS 2007 International Mathematics Report*

TIMSS 2011 data from: *TIMSS 2011 International Results in Mathematics*

TIMSS 2015 data from: *TIMSS 2015 International Results in Mathematics*

TIMSS Advanced 2008 data from: *TIMSS Advanced 2008 International Report*