

ACCI Annual Conference 2015

May 22, 2015



HIGH SCHOOL STUDENTS AND FINANCIAL LITERACY: EVIDENCE FROM PISA

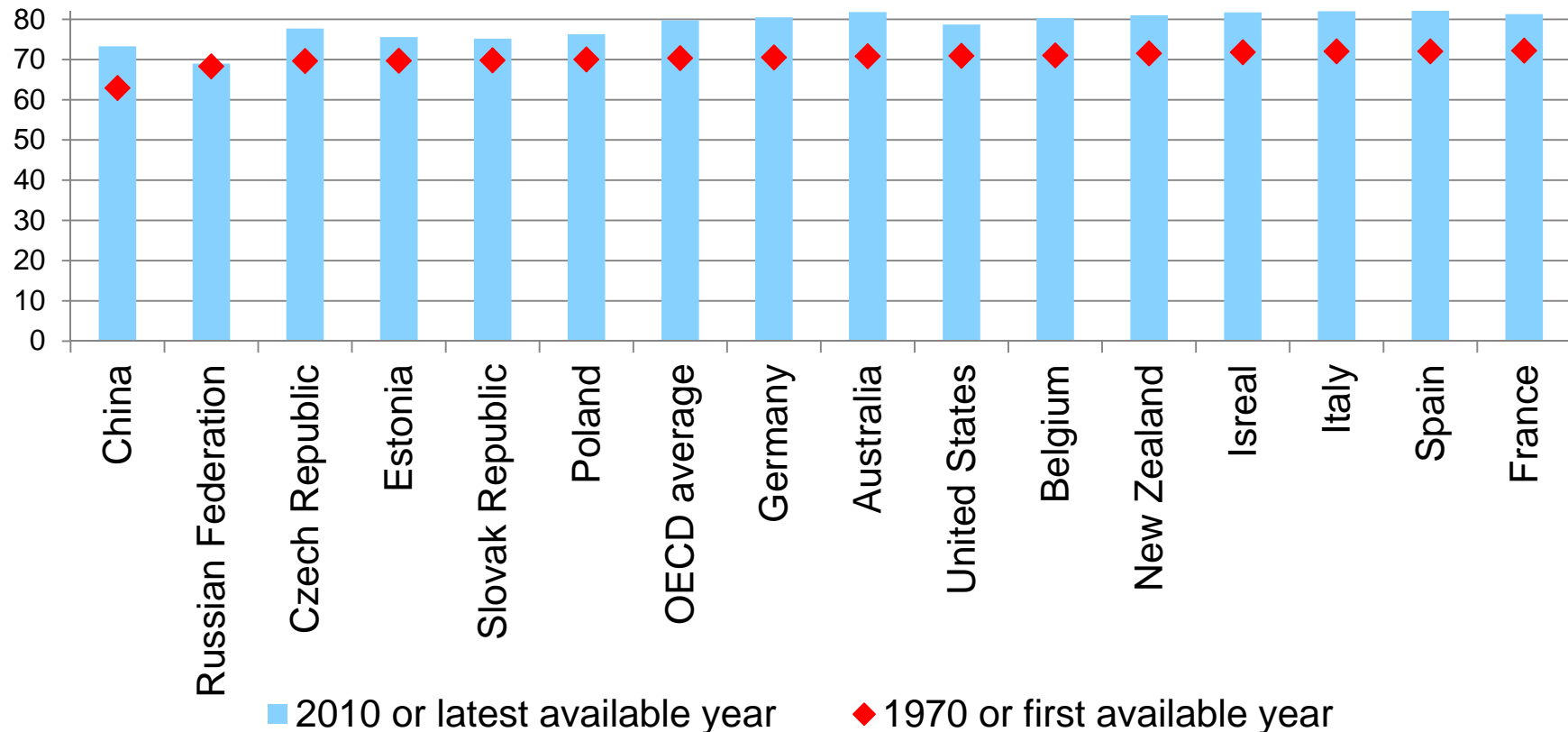
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Why is financial literacy relevant for young people?

- Big decisions at a young age: e.g., whether to continue education
- Financing cost of education and training
- Shifting demographics—increased longevity
- Shrinking welfare systems; increased personal responsibility
- Changing labor markets and reduced job security
- Increasingly complex financial markets
- Access to financial products at young ages

Increase in life expectancy changes everything



Source: OECD Factbook 2013: Economic, Environmental and Social Statistics - © OECD 2012

- Life expectancy is high, and has kept growing.
- Young people today will need to be able to support themselves for many years.

Programme for International Student Assessment (PISA)

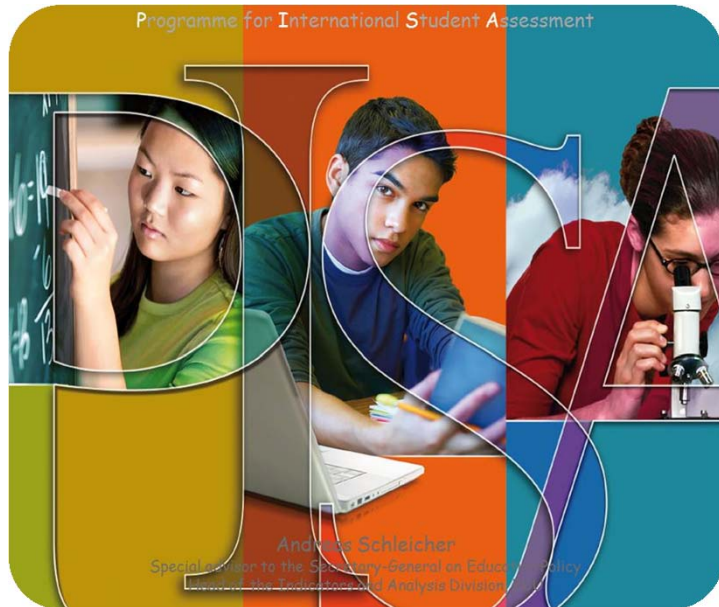
Are students well prepared for future challenges?

Can they analyze, reason and communicate effectively?

Do they have the capacity to continue learning throughout life?



Every three years the OECD Programme for International Student Assessment (PISA) answers these questions and more. It assesses to what extent students near the end of compulsory education have acquired some of the knowledge and skills essential for full participation in society.



2012 Programme for International Student Assessment (PISA)

Over half a million students representing 28 million 15-year-olds in 65 countries/economies took the test

- Mathematics, reading, science, problem solving, and **financial literacy**
- Parents, principals, and system leaders provided data on school policies, practices, resources and institutional factors that help explain differences in performance

New module on financial literacy in 2012

- This is the first large-scale international study to assess the financial literacy of 15-year-old students
- Financial literacy assessment framework

The framework was the first step in constructing a financial literacy assessment of international scope by providing an articulated plan for developing items, designing the instrument and providing a common language for discussion of financial literacy.

Financial Literacy Assessment Framework

A multiple-year project

- A group of experts was put together by the OECD to design the 2012 module on financial literacy
- They represented many countries and many stakeholders (Treasury departments, central banks, regulators, practitioners, academics)
- Experts worked on the assessment for about two years



Definition of financial literacy

*“Financial literacy is **knowledge and understanding** of financial concepts and risks, and the **skills, motivation and confidence** to **apply** such knowledge and understanding in order to make **effective decisions** across a **range of financial contexts**, to improve the financial well-being of **individuals and society**, and to enable **participation in economic life**.”*

Organizing the domain

A model for organizing the domain

1. Content:

The areas of knowledge and understanding

2. Process:

Approaches and mental strategies

3. Contexts:

Situations in which the knowledge and understanding are applied

Content

Content

Money and transactions

- Coins and notes
- Different ways of making payments
- Understanding bank statements

Planning and managing finances

- Saving and spending
- Credit and debt
- Financial decision making

Risk and reward

- Investment and saving
- Diversification
- Using credit
- Volatility of the market
- Exchange rates

Financial landscape

- Consumer rights and responsibilities
- Understanding of the wider financial, economic and social system

Processes

Processes

Identifying financial information

Contracts, advertisements, charts, tables, forms and instructions. e.g. identify the features of a purchase invoice, or recognise the balance on a bank statement

Analyse information in a financial context

e.g. Compare the terms offered by different mobile phone contracts

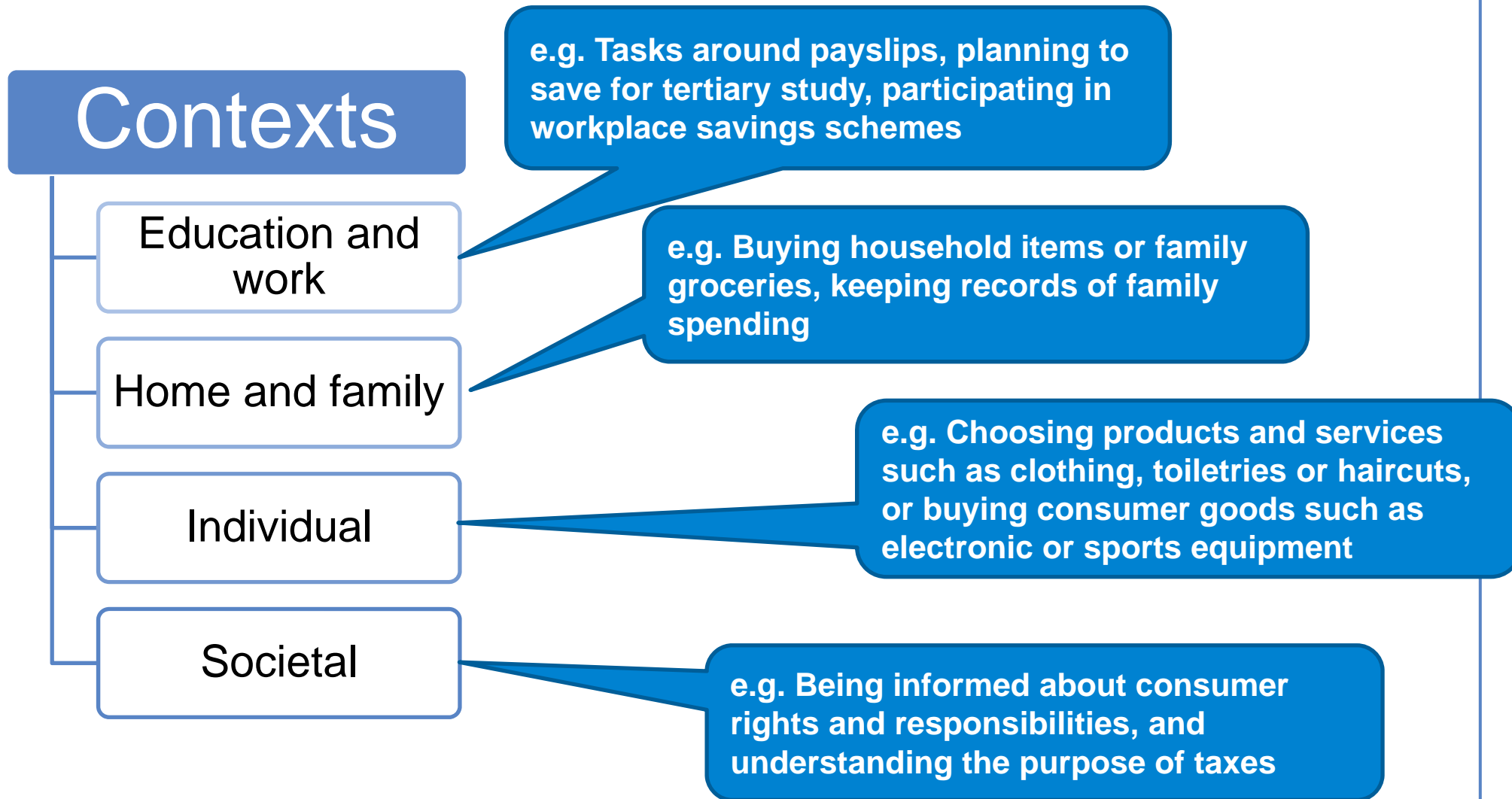
Evaluate financial issues

Draw on knowledge, logic and plausible reasoning to make sense of, and form a view about, a finance-related problem

Apply financial knowledge and understanding

e.g. Work out whether purchasing power will decline or increase over time when prices are changing at a given rate.

Contexts



Examples of what this might mean for 15-year-olds

Balance their priority and plan what to spend money on

- ...if they go to the movie theater, will they still have enough money for the bus fare home? Or would it be better to buy pizza and invite friends home?

Remember that some of the purchases have ongoing costs

- ...a games console will need new games, a motorbike will need fuel and tyres and services and so on.

Being alert to possible fraud

- ...Some emails that look like they came from their bank might not be legitimate, they should know what to do if they are not sure

Knowing what risk is and what insurance is meant for

- ...If their phone gets stolen, they should ask their parents if it is covered by their household insurance

Make an informed decision about credit

- ...they should know that if they buy a computer on credit they will have to pay interest on the loan as well as paying the advertised price for the computer
- ...and they will realise that the less they repay of that loan each month, the more they will pay in interest

Participating countries-economies

**18 countries-economies participated in the
2012 Financial Literacy Assessment**

Australia, Belgium (Flemish Community),
Shanghai-China, Colombia, Croatia, Czech
Republic, Estonia, France, Israel, Italy, Latvia,
New Zealand, Poland, Russia, Slovak Republic,
Slovenia, Spain, and the United States

Data was released on July 9, 2014

US release of PISA financial literacy data, The George Washington University, July 9, 2014



Financial literacy skills for the 21st century



PISA 2012 Results: Students and Money

FINANCIAL LITERACY SKILLS
FOR THE 21ST CENTURY

VOLUME VI



Programme for International Student Assessment

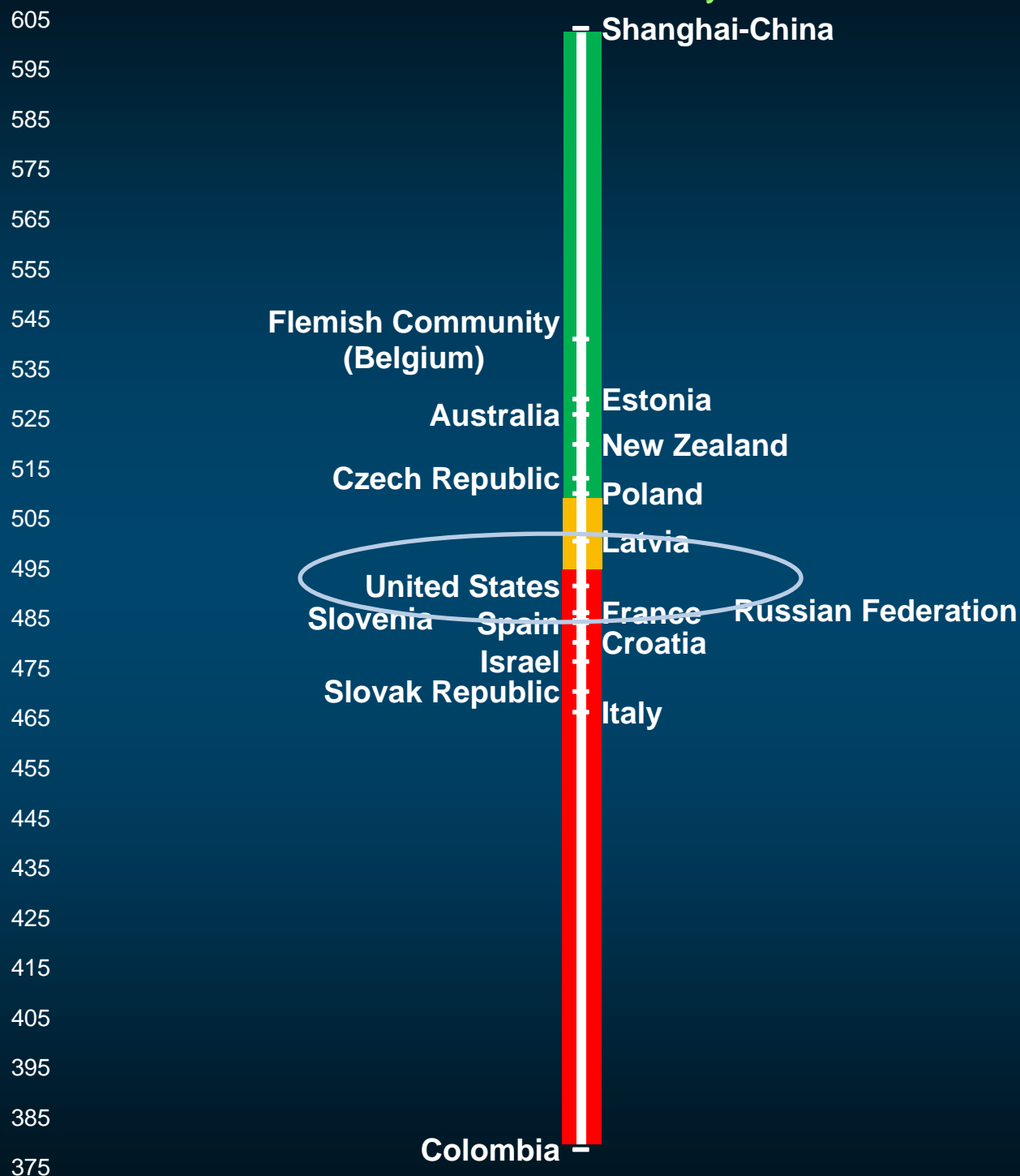
Some findings

- Financial literacy across countries
 - Who does well in financial literacy?
- Financial literacy within countries
 - Distribution of student performance
- Examining differences in financial literacy
 - Do students in more developed countries display higher financial literacy?
 - Are there differences between male and female students?
 - Does socio-economic background matter?
 - Does use of financial products affect financial literacy?

Mean score

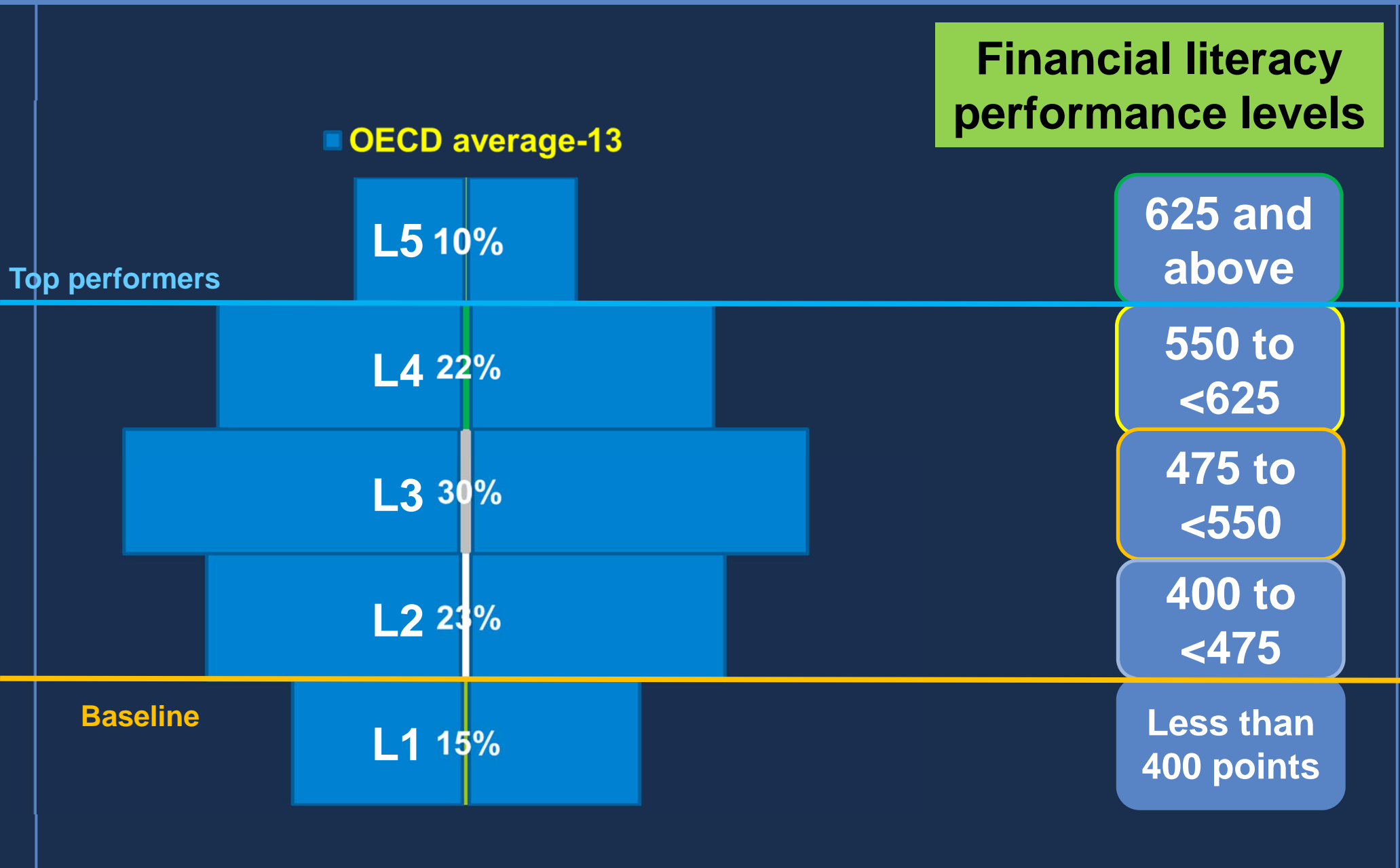
Strong performance in
financial literacy

Average performance
of 15-year-olds in
financial literacy



Low performance in financial literacy

Distribution of student performance



Levels of financial literacy: definitions

Level 1: Students can identify common financial products and terms and interpret information relating to basic financial concepts. They can recognize the difference between needs and wants and can make simple decisions on everyday spending. They can recognize the purpose of everyday financial documents such as an invoice and apply single and basic numerical operations (addition, subtraction or multiplication) in financial contexts that they are likely to have experienced personally.

Level 2: Students begin to apply their knowledge of common financial products and commonly used financial terms and concepts. They can use given information to make financial decisions in contexts that are immediately relevant to them. They can recognize the value of a simple budget and can interpret prominent features of everyday financial documents. They can apply single basic numerical operations, including division, to answer financial questions. They show an understanding of the relationships between different financial elements, such as the amount of use and the costs incurred.

Levels of financial literacy: definitions (cont.)

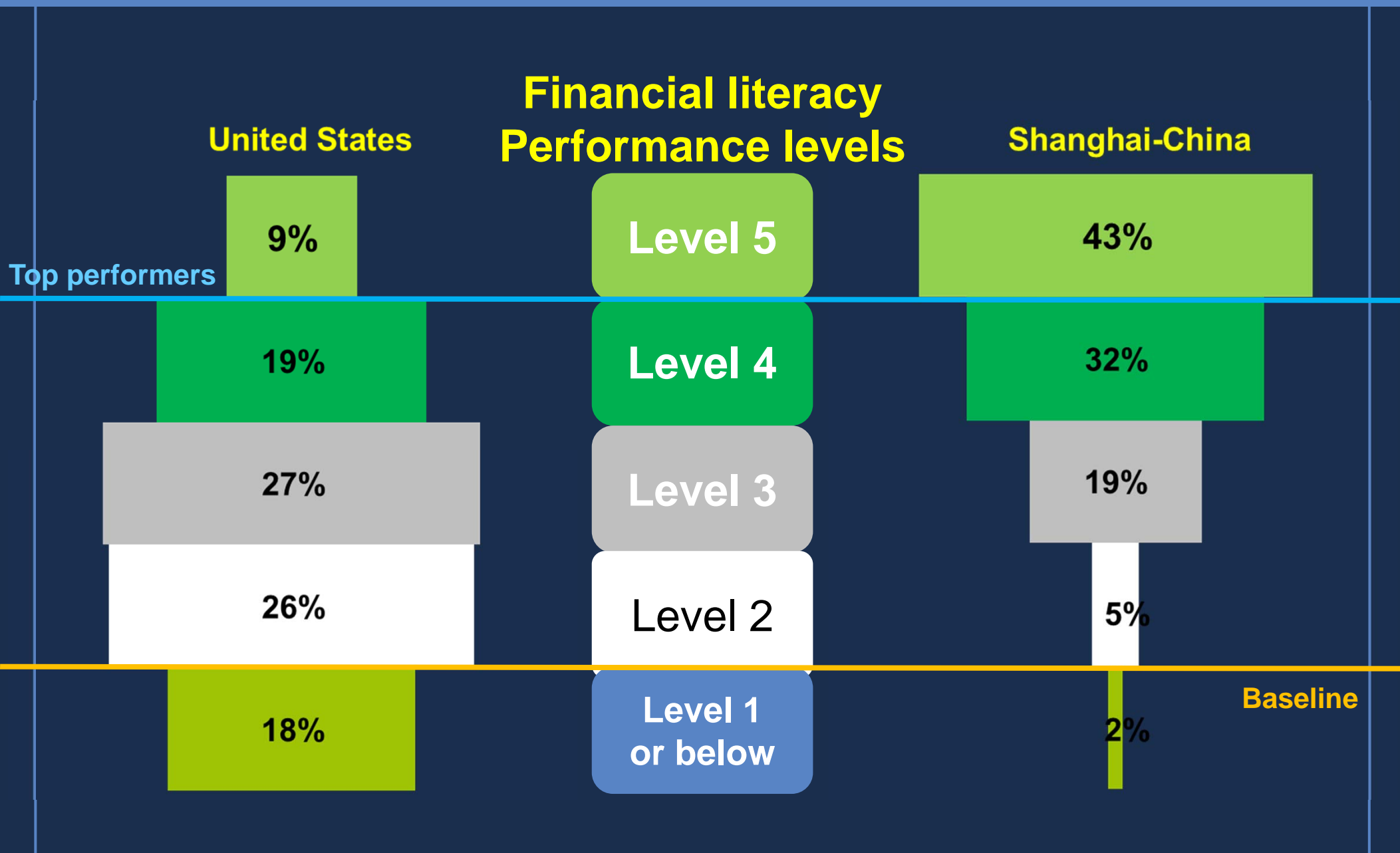
Level 3: Students can apply their understanding of commonly used financial concepts, terms and products to situations that are relevant to them. They begin to consider the consequences of financial decisions and they can make simple financial plans in familiar contexts. They can make straightforward interpretations of a range of financial documents and can apply a range of basic numerical operations, including calculating percentages. They can choose the numerical operations needed to solve routine problems in relatively common financial literacy contexts, such as budget calculations.

Level 4: Students can apply their understanding of less common financial concepts and terms to contexts that will be relevant to them as they move towards adulthood, such as bank account management and compound interest in saving products. They can interpret and evaluate a range of detailed financial documents, such as bank statements, and explain the functions of less commonly used financial products. They can make financial decisions taking into account longer-term consequences, such as understanding the overall cost implication of paying back a loan over a longer period, and they can solve routine problems in less common financial contexts.

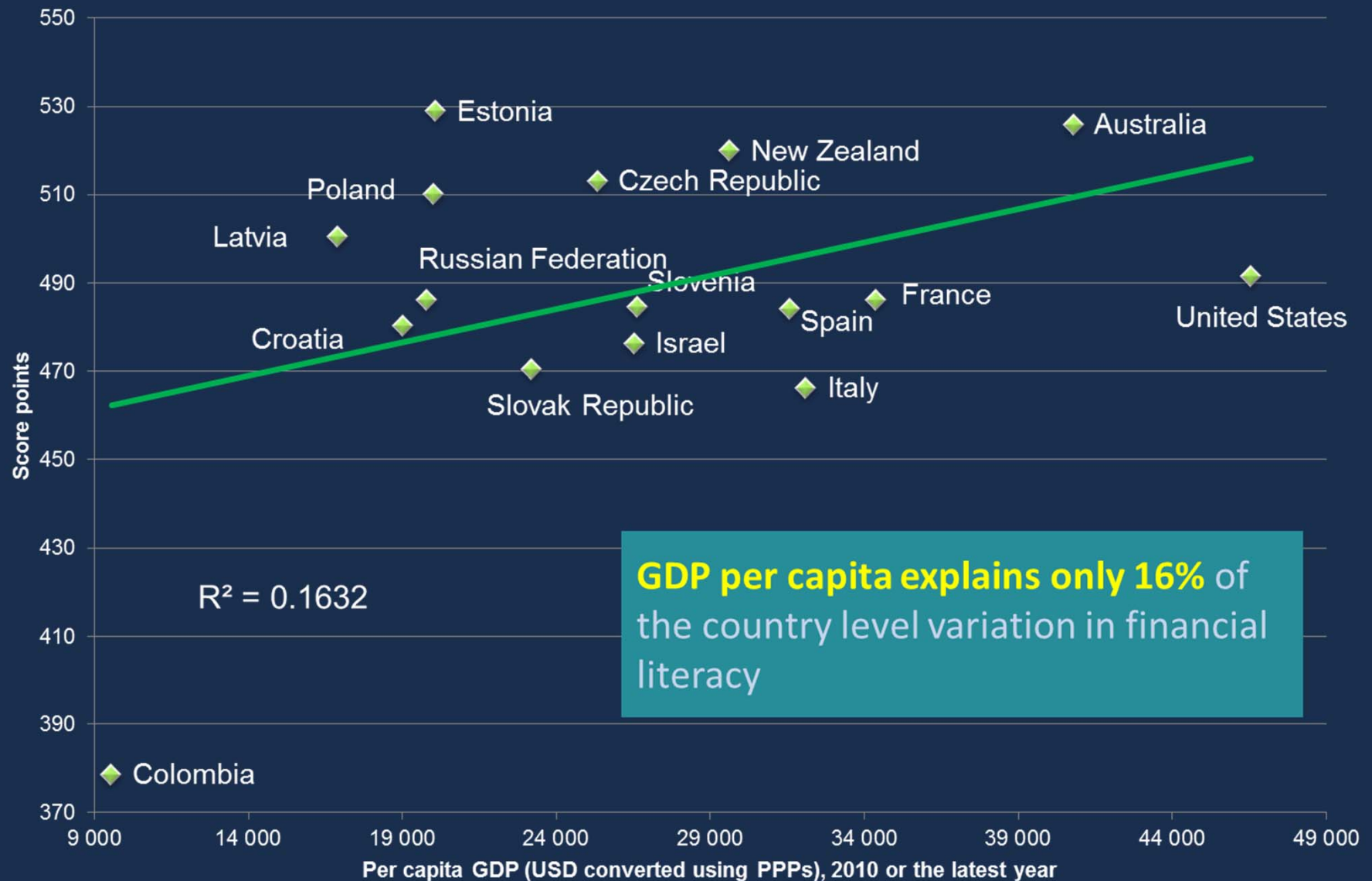
Levels of financial literacy: definitions (cont.)

Level 5: Students can apply their understanding of a wide range of financial terms and concepts to contexts that may only become relevant to their lives in the long-term. They can analyze complex financial products and can take into account features of financial documents that are significant but unstated or not immediately evident, such as transaction costs. They can work with a high level of accuracy and solve non-routine financial problems, and they can describe the potential outcomes of financial decisions, showing an understanding of the wider financial landscape, such as income tax.

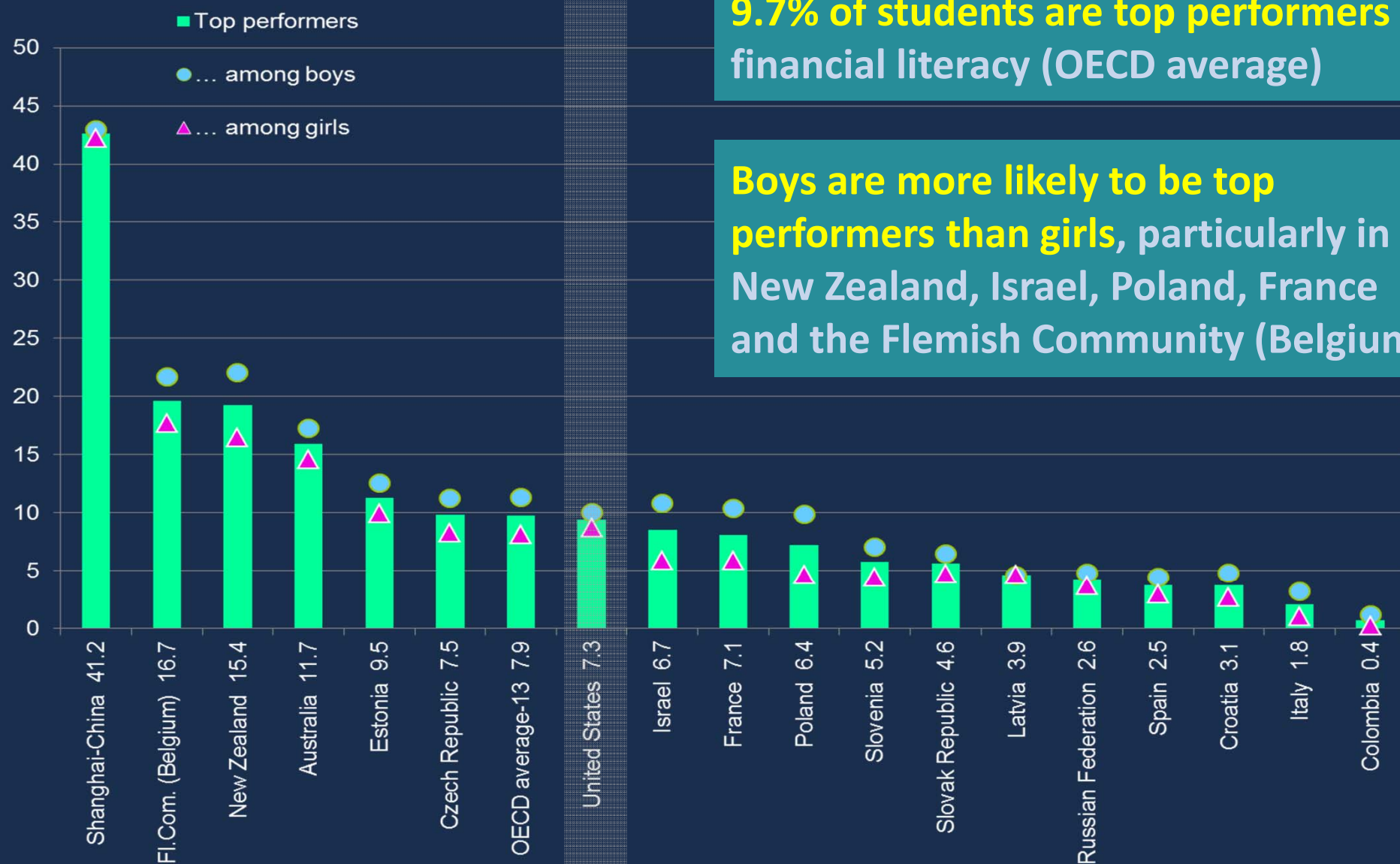
Distribution of performance, US vs. Shanghai-China



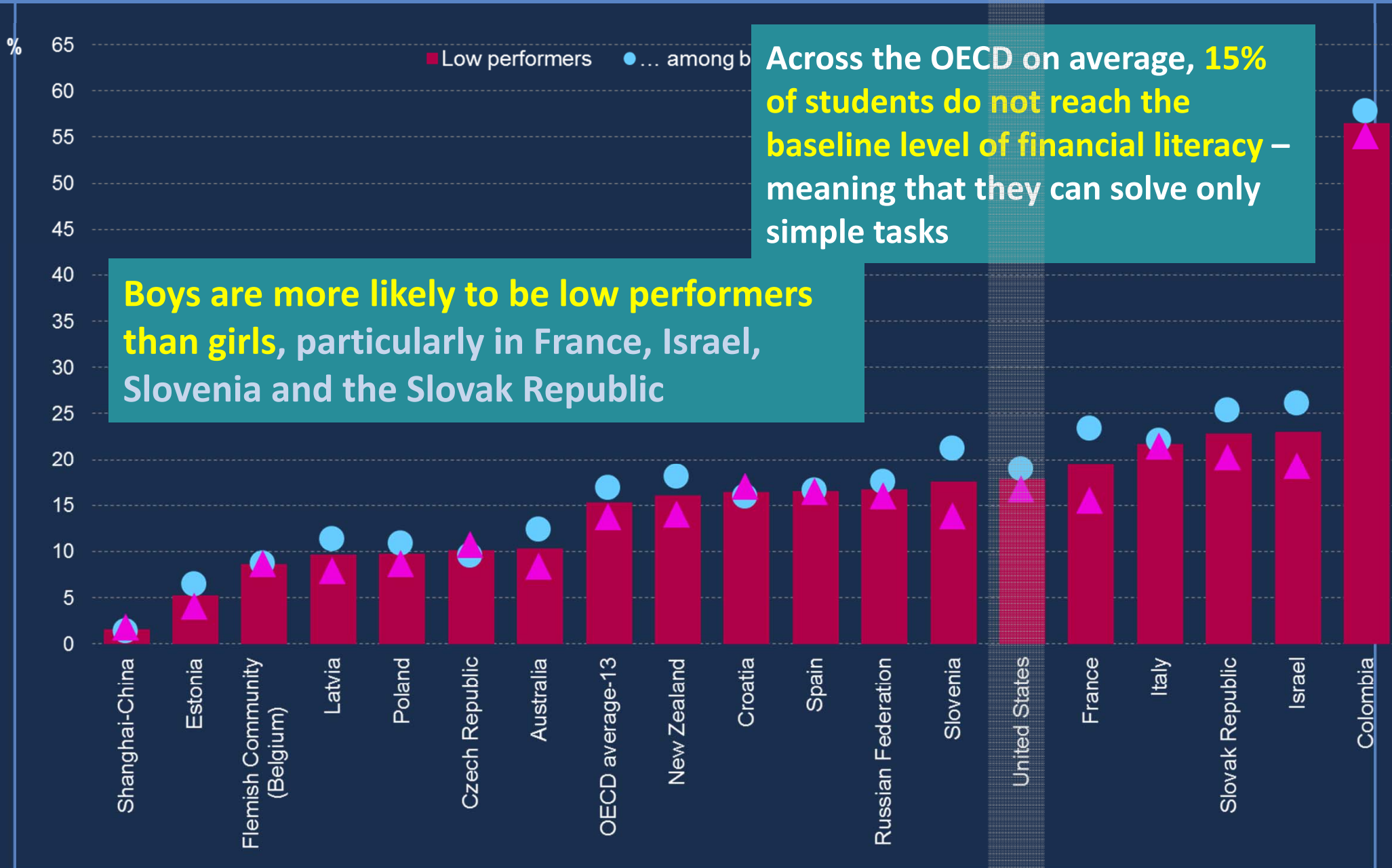
Differences only partially explained by GDP per capita



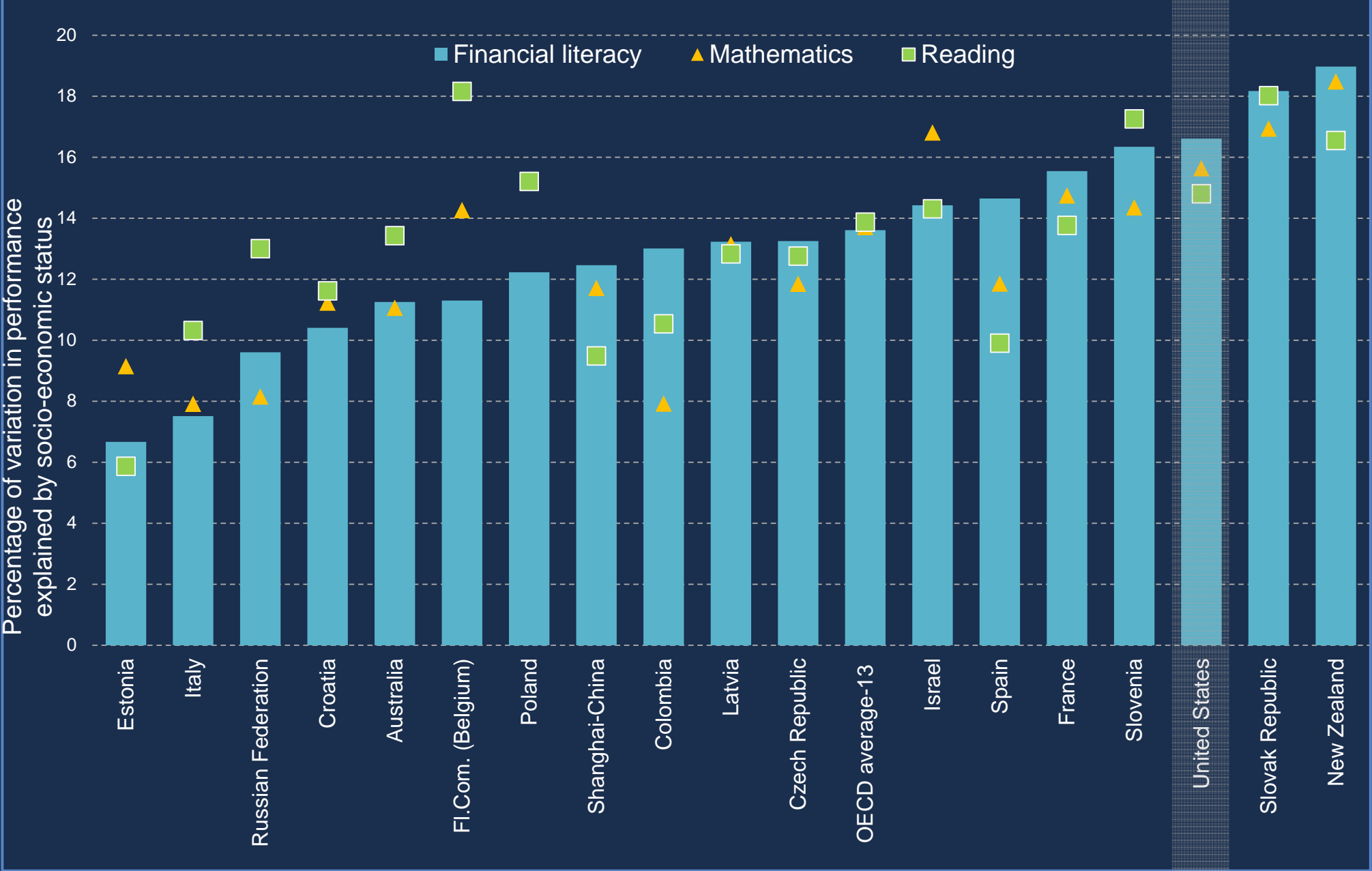
Top performers in financial literacy, by gender



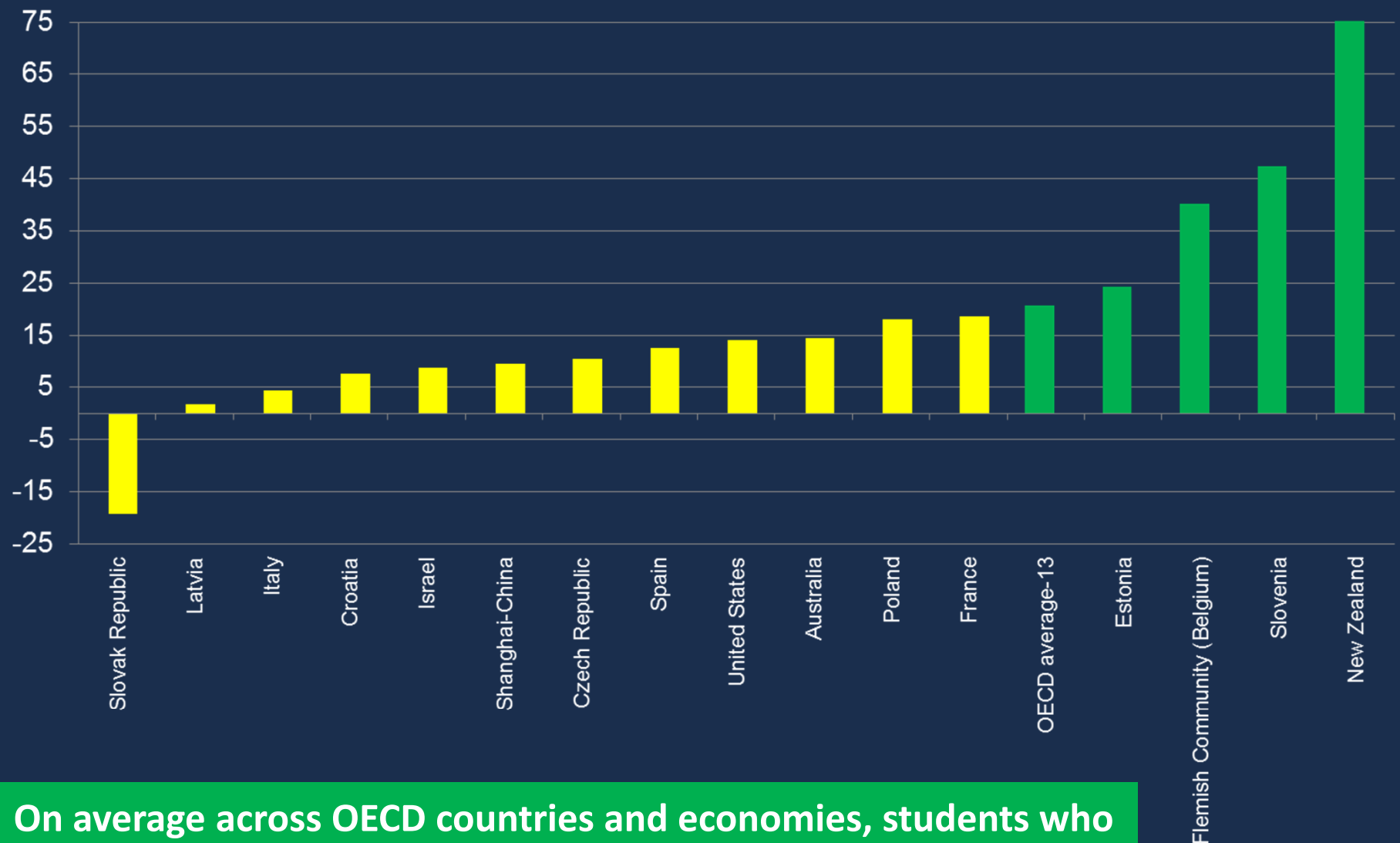
Percentage of low-performing students in financial literacy



Relationship between socio-economic status and financial literacy, mathematics, and reading performance



Gaining financial literacy through experience: Relevance of bank account holding (accounting for socio-demographics)



On average across OECD countries and economies, students who hold a bank account score 21 points higher than students with similar socio-economic status who do not.

What have we learned?

Some preliminary findings

- **Countries differ in the level of financial literacy of young people and financial literacy is not necessarily higher in the richer countries or the countries with most developed financial markets**
- **There is a sizeable group of young people in many countries who perform below the baseline level, and many are male students**
- **Socio-economic status is an important determinant of financial literacy**

Global Policy Research Symposium to Advance Financial Literacy, joint initiative OECD and GFLEC

Based on findings from 2012 PISA

- **Held in Paris on November 6, 2014**
- **The Symposium discussed PISA findings in more detail with a focus on inequality**
- **Title of the Symposium: *Towards a more inclusive society***

www.gflec.org

There is a lot more to learn

Very rich data

- **There is so much that can be done using these data both within and across countries**
- **Rich set of information about schools, exposure to financial education, teachers' training, parents, etc.**
- **PISA data has had a large impact on education policies**

New data in 2015

Financial literacy data is collected again in 2015

- It is possible to compare data not just across countries but also over time
- This makes it possible to assess effects of policies
- Note that several countries have undertaken new initiatives for the young, including making financial literacy mandatory in school (UK)

GFLEC's Global Network



New Course: Personal Finance

A new course at the George Washington University

Financial Decision-Making: Implications for the Consumer and the Professional

- **Cover personal finance with a rigorous approach**
 - A quantitative approach to personal finance
 - Teaching takes into consideration gender differences in fin literacy
- **It incorporates some macro, accounting, and risk management**
- **Writing a new textbook on personal finance**
 - Joint with a mathematician

Our (STAR) students

Undergraduates, graduate students and... athletes

Our students in and out of the classroom



Final thoughts

➤ **Financial literacy is like reading and writing**

- As it was not possible in the past to participate in society without being able to read and write, so it is not possible to thrive in today's society without being financially literate

➤ **Building human capital for the 21st century**

- Everyone deals with finance and finance is sufficiently complex that we cannot leave it to the individual to learn by himself/herself

Financial Literacy: The best line of defense

"Well-informed consumers, who can serve as their own advocates, are one of the best lines of defense against the proliferation of financial products and services that are unsuitable, unnecessarily costly, or abusive."

Ben Bernanke, Former Chairman of the Fed

Final quote

“If you think education is expensive, try ignorance”

Derek Bok, Former President of Harvard

Contact and further information

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