How to restore a healthy financial sector that supports long-lasting, inclusive growth?

Finance is a vital ingredient of economic growth, but there can be too much of it. Over the past 50 years, credit by banks and other institutions to households and businesses has grown three times as fast as economic activity. At these levels, further expansion is likely to slow long-term growth and raise inequality.

Main findings

Different kinds of finance have different effects on economic activity:

- More credit to the private sector slows growth in most OECD countries.
- More stock market financing boosts growth in most OECD countries.
- Credit is a stronger drag on growth when it goes to households rather than businesses.
- Bank loans slow economic growth more than bonds.

Financial expansion fuels greater income inequality, mainly because:

- People with higher income benefit more than poorer ones from credit-financed investment opportunities.
- The sector pays high wages, which are above what employees with similar profiles earn in the rest of the economy. This premium is particularly large for top-income earners.

In the short term, measures to avoid credit overexpansion can hurt economic activity and temporarily restrict access to credit and home ownership for some, until prices adjust.

Reforms to make the financial sector more stable can be expected to boost long-term economic growth and improve income equality.

A healthy contribution of the financial sector to strong and equitable growth requires in particular:

- The use of macro-prudential instruments to prevent credit overexpansion and the supervision of banks to maintain sufficient capital buffers.
- Measures to reduce explicit and implicit subsidies to too-big-to-fail financial institutions through break-ups, structural separation, capital surcharges or credible resolution plans.
- Reforms to reduce the tax bias against equity financing and to make value added tax neutral between lending to households and businesses.

The global financial crisis has raised deep questions about the role of finance

Credit intermediation and stock markets have hugely expanded over the past half-century. Since the 1960s, credit by banks and other financial institutions to households and businesses has grown three times as fast as economic activity. Stock markets have expanded, too, but starting from a lower base and at a much slower pace, so that today their value equals 65% of GDP, a little more than half that of financial sector credit.

At the same time, the structure of financial activities has undergone a profound transformation; for example, the share of credit going to households, rather than businesses, has risen. Financial expansion and transformation have been occurring at the same time as growth slowed down and income inequality widened. The recent massive financial sector crash entailed considerable income and job losses. This sequence of events has raised deep questions about the influence of finance on economic activity and the distribution of income:

1. What are the effects of changes in the size and structure of finance on economic growth?

2. How do financial developments influence income inequality?

3. Which public policies can improve the contribution of finance to economic and social well-being?

Avoiding credit overexpansion and improving the structure of finance are good for economic growth

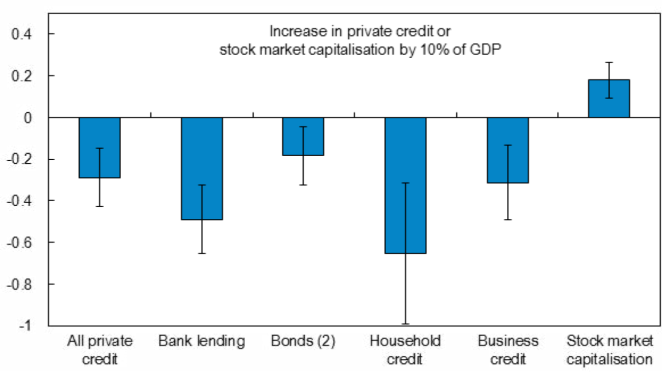
Finance is a key ingredient of long-term economic growth, but this ingredient can become problematic if overused. More finance is linked with sharply higher growth at early stages of credit and stock market development. However, above a certain point, further financial expansion is associated with slower growth. The threshold at which the relationship of finance with growth becomes negative differs from country to country depending on a range of factors including a country's financial structure, the quality of its regulation and its financial interconnectedness.

In most OECD countries, further expansion in credit by banks and similar intermediaries (henceforth called bank credit) slows rather than boosts long-term growth (Figure 1). On average across OECD countries, a 10% of GDP increase in the stock of bank credit is associated with a 0.3 percentage point reduction in long-term growth. This conclusion holds for the long term. In the short term, issuing new credit can fuel demand. On the other hand, further expansions in access to equity finance for a wider range of companies are likely to promote economic growth.

Improving the structure and composition of finance is as important as avoiding credit booms for the health of our economies. Facilitating stock market funding through lowering the costs of equity floatation and making taxation more neutral between debt and equity, is linked with higher GDP growth (Figure 1). Hence, encouraging changes in the mode of finance, away from debt and towards equity, would be particularly powerful in raising economic activity.

Figure 1. Different forms of financial expansion have contrasting effects on growth[1]

Percentage point change in real GDP per capita growth



1. The empirical associations are based on panel regressions of GDP growth on financial indicators, standard control variables, country fixed effects, year fixed effects and country-by-country linear time trends. The sample covers 27-34 OECD countries. Tests of causality, based both on a novel instrumental variables strategy and the generalised-method-of-moments approach, tend to deliver estimates of the same sign. The bars indicate the point estimate and are surrounded by the 90% confidence interval. All private credit uses different data to the decompositions by lender (Bank lending and bonds) and by borrower (Household credit and business credit) and should therefore not be viewed as a weighted average.
2. Bonds also include other forms of non-bank lending. Source: Cournède, B. and O. Denk (2015), "Finance and Economic Growth in OECD and G20 Countries", OECD Economics Department Working Papers, No. 1223, OECD Publishing.

The main channels linking the long-term increase in credit and slowing growth:

Five major factors have been identified:

1. Excessive financial deregulation

All OECD and G20 countries relaxed financial regulation in the 40 years preceding the global financial crisis. During its first decades, the relaxation of financial regulations was beneficial for economic activity. Later, however, it appears to have gone too far, weakening economic fundamentals.

2. A more pronounced increase in bank lending than bond financing

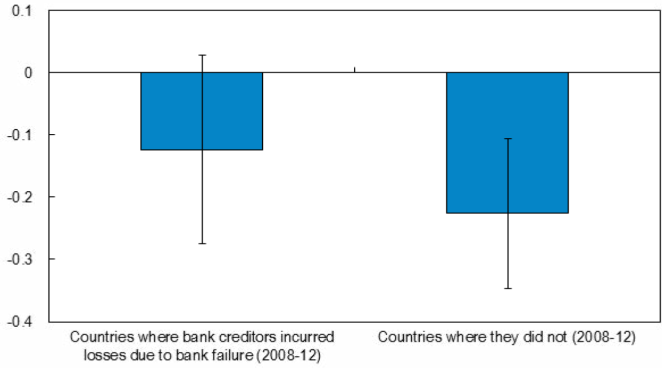
New bank loans have outpaced the issuance of bonds over several decades. However, bank loans are found to slow down economic growth more than bonds (Figure 1).

3. Too-big-to-fail guarantees by the public authorities

That bank loans slow down growth more than other ways of credit financing, such as bonds, suggests that too-big-to-fail guarantees (TBTF) to banks are one channel encouraging excessive credit provision. This is supported by evidence that the link between credit and growth is not as negative in OECD countries where creditors incurred losses due to bank failures as in those where they incurred no such losses (Figure 2).

Figure 2. Treating banks as too-big-to-fail appears to hurt growth

Percentage point change in real GDP per capita growth associated with an increase in bank credit by 10% of GDP



Note: The figure shows econometric estimates of the association of an increase in bank credit with GDP growth, controlling for a wide range of factors. It shows point estimates surrounded by 90% confidence intervals. The specification regresses real GDP growth per capita on bank credit to the non-financial private sector divided by GDP, gross fixed capital formation divided by GDP, average years of schooling in the adult population, the growth rate of the working age population, country fixed effects, year fixed effects and country-specific linear time trends.
Source: Denk, O., S. Schich and B. Cournède (2015), "Why Implicit Bank Debt Guarantees Matter: Some Empirical Evidence", OECD Journal: Financial Market Trends, Vol. 2014/2, OECD Publishing. DOI: http://dx.doi.org/10.1787/fmt-2014-5js3bfznx6vj.

4. A lower quality of credit

A higher quantity of credit is likely to go together with a lower credit quality. The data indicate that economic growth tends to be faster at times when the quality of lending is better.

5. A disproportionate increase in household credit compared with business credit

The proportion of credit going to households (as opposed to businesses) in overall credit has risen considerably over past decades. This trend matters because credit is a stronger drag on growth when it goes to households rather than businesses (Figure 1).

The long-term costs from credit overexpansion fall disproportionately on the socially vulnerable

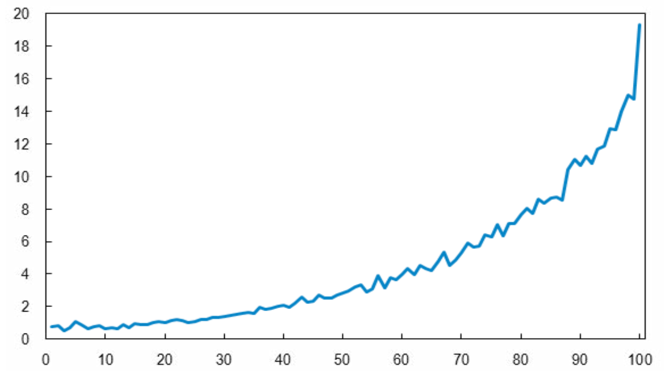
In addition to its effect on economic growth, finance can influence the distribution of income. The empirical work suggests three key mechanisms:

1. Financial sector workers are very concentrated at the top of the income distribution

There are few financial sector employees in low-income brackets and many higher up in the income distribution (Figure 3). In Europe, financial sector employees make up 20% of the top 1% earners, but are only 4% of overall employment. The strong presence of financial sector workers among top earners is justified as long as very high productivity underpins their earnings. However, detailed econometric investigations find that financial firms pay wages well above what employees with similar profiles earn in other sectors.

Figure 3. Financial sector employees are concentrated in the upper end of the income distribution

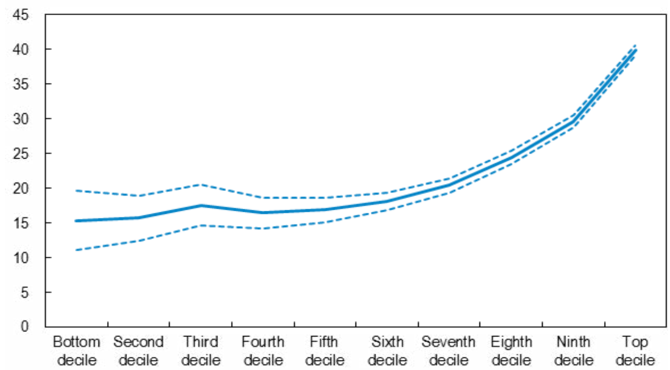
Percentage share of financial sector employees in each percentile of the income distribution in European countries



Note: The figure depicts the simple average across EU countries for which data are available and Norway. It is calculated using Eurostat's micro-level Structure of Earnings Survey database for 2010. Data for Germany relate to 2006. The sample size varies considerably across countries, and the coverage of sectors is not exactly the same in all countries.
Source: Denk, O. (2015), "Financial Sector Pay and Labour Income Inequality: Evidence from Europe", OECD Economics Department Working Papers, No. 1225, OECD Publishing, Paris.

Figure 4. Finance pays more than other sectors for workers with similar profiles especially at the top

Estimated financial sector wage premium across the income distribution in European countries, %, 2010



Note: The financial sector wage premium is the percentage by which gross annual earnings of weighted full-time full-year equivalent employees in finance exceed what other sectors pay. It is obtained from micro-econometric regressions controlling for age, gender, highest level of education, years of experience in the firm and their square, employees in the firm, geographical location of the firm, type of financial control, level of wage bargaining, type of employment contract, number of overtime hours paid and occupation. The estimates are calculated using Eurostat's micro-level Structure of Earnings Survey database for 2010. Data for Germany relate to 2006. The figure depicts the simple average of EU countries for which data are available and Norway. The dotted lines represent the 90% confidence band.
Source: Denk, O. (2015), "Financial Sector Pay and Labour Income Inequality: Evidence from Europe", OECD Economics Department Working Papers, No. 1225, OECD Publishing.

The premium is especially large for top earners (Figure 4). The wage premia could reflect specific profit-generating skills in finance not captured by the individual characteristics that employers report in the micro data used for the estimation. Lack of competition for financial services could be another source of the wage premia. In particular, subsidies associated with public support such as too-big-to-fail guarantees can accrue to employees with bargaining power through higher wages, consumers through cheaper or more abundant borrowing, as well as other stakeholders involved in banks' business. Econometric investigations show a positive association between higher wage premia and deeper credit intermediation, a finding consistent with the possible presence of rent sharing.

2. High income earners can and do borrow more

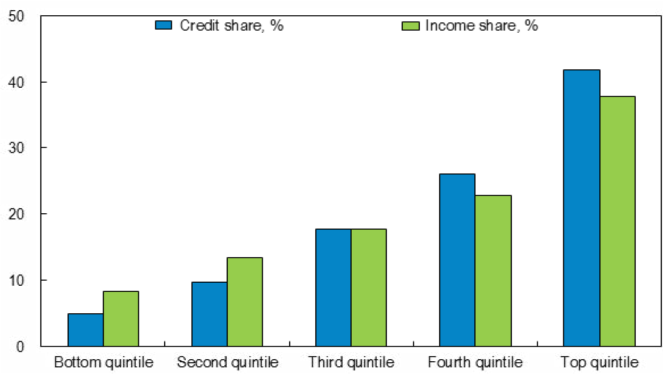
The distribution of credit is twice as unequal as the distribution of household income in the euro area (Figure 5). Therefore, credit expansion fuels income inequality as the well-off gain more than others from the investment opportunities they identify.

3. The growth of stock market capitalisation has contributed to greater income inequality

The likelihood that households hold listed stocks increases markedly with income. In the euro area, stock market wealth is four times more unequally distributed than household income. As a consequence, larger stock markets, which generate more dividends and capital gains, widen the income distribution.

Figure 5. Household credit is more unevenly distributed than income

Euro area countries, 2010

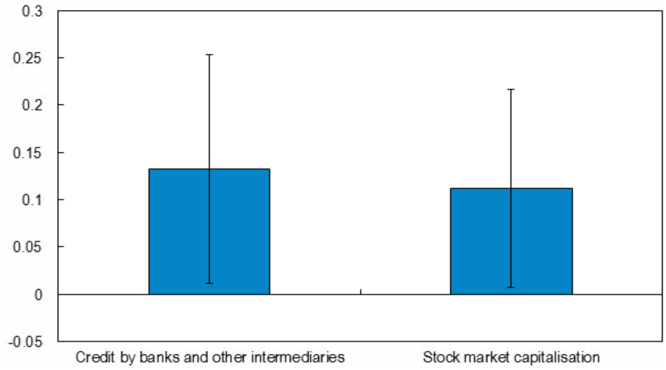


Note: Income quintiles are based on annual household gross income for household credit and on disposable income for household income. The figure depicts the simple average of OECD countries which belong to the euro area and for which data are available.
Source: Denk, O. and A. Cazenave-Lacroutz (2015), "Household Finance and Income Inequality in the Euro Area", OECD Economics Department Working Papers, No. 1226, OECD Publishing.

Empirical analysis shows that, as a result of all these channels, expansions in bank credit and stock markets are both linked with a more unequal distribution of income. In other words, more finance, in whichever form, goes hand in hand with higher income inequality in OECD economies (Figure 6). Empirical analysis shows that, as a result of all these The wage premium for financial sector employees explains about half of the total effect of the financial sector on income inequality.

Figure 6. More credit intermediation and stock market financing are linked with greater income inequality

Change in Gini coefficients for disposable income associated with an increase in finance by 10% of GDP, Gini points

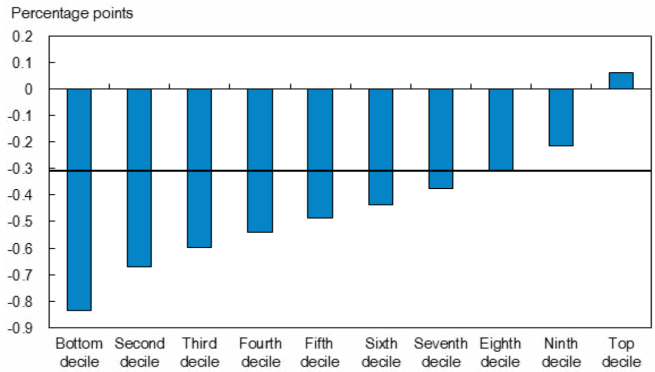


Note: The figure shows point estimates surrounded by confidence intervals at the 90% level.
Source: Denk, O. and B. Cournède (2015), "Finance and Income Inequality in OECD Countries", OECD Economics Department Working Papers, No. 1224, OECD Publishing.

Simulation analysis indicates that credit overexpansion slows income growth for most of the population, even though top income earners benefit from it (Figure 7). Furthermore, more stock market finance appears to slow the income growth of low-income households, even though stock market capitalisation boosts average incomes.

Figure 7. The effect of credit expansion varies a lot across income levels

Simulated effect of a 10% of GDP expansion of financial sector credit on household income growth



Note: Household income growth is household disposable income growth per capita. The horizontal line indicates the change in household income growth for the economy as a whole.
Source: Denk, O. and B. Cournède (2015), "Finance and Income Inequality in OECD Countries", OECD Economics Department Working Papers, No. 1224, OECD Publishing, Paris.

The policy response: A better architecture for the financial system

The empirical analysis underpinning the study finds a link from financial deregulation to financial expansion and slower growth. It indicates that reform to make finance sounder is likely to boost long-term economic growth and reduce income inequality.

The empirical analysis did not investigate direct effects of each financial policy item on growth and inequality, for lack of data covering enough countries item by item for long enough. Individual policies are discussed below based on their effects on financial outcomes and on the above empirical evidence about how these financial outcomes influence growth and inequality. Besides, this note does not cover other areas of financial reform, such as credit-rating agencies, the shadow banking system, over-the-counter derivatives, accounting standards and unique global legal-entity identifiers for parties to financial transactions, which are not directly related to the empirical findings of the project.

Ensuring that the financial sector contributes to strong and equitable growth involves avoiding credit overexpansion, which hurts growth and income equality, and improving the structure of finance:

1. Avoiding credit overexpansion

The links from credit overexpansion to slower growth and greater income inequality underline the long-term benefits of avoiding too much debt. Macro-prudential instruments provide tools to keep credit in check. Caps on debt-service-to-income ratios have been identified as effective in this regard. Macro-prudential measures, however, often encounter the political economy difficulty that, at the time of their adoption, such reforms make it more difficult for buyers with limited resources to buy residential property, although this distributive effect should wane once prices adjust.

Strong capital requirements reduce the extent to which banks can fund lending through liabilities that benefit from public support. Substantial progress has already been made under the Basel III framework. However, much remains to be done to reduce governments' implicit support for too-big-to-fail institutions and level the playing field for competition between large and small banks. One way of phasing out de facto public support to systemically important financial institutions would be to split TBTF banks into entities sufficiently small that they could go bankrupt without creating systemic risk. An alternative approach is to impose capital surcharges on TBTF banks, require TBTF banks to present credible resolution plans (so-called "living wills"), encourage the separation of TBTF banks' more risky activities from their systemic utility functions and ensure a wider participation of the private sector in the sharing of losses of insolvent banks. Many OECD countries are currently pursuing reforms along these lines at the national and international level in particular under the auspices of the European Union and the Basel Committee for Banking Supervision.

Tight bank regulation may have the effect of pushing risk to other compartments of financial markets, such as the so-called "shadow banking" sector. A shift away from institutions that benefit from de facto public support does not represent a problem if risk moves to parts of the market where investors are more likely to absorb losses themselves. Such risk migration can, however, become an issue if the recipient parts of the financial system in turn become systemic and threaten overall stability. This concern requires that financial supervision authorities maintain their efforts to monitor risks on a system-wide basis rather than for particular players in the financial system.

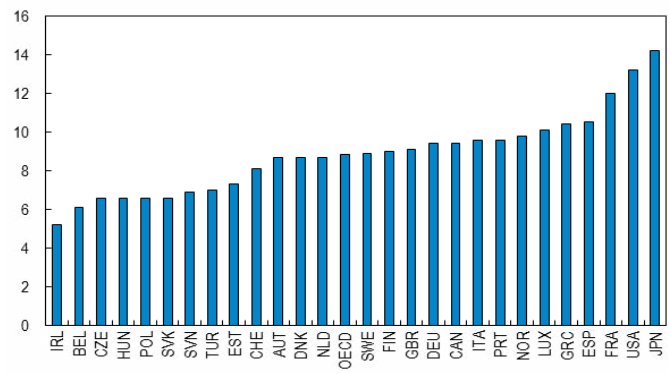
Financial stability, economic equality and public trust stand to gain from reforms to improve financial sector compensation practices. In particular, this involves restricting pay that rewards short-term success without taking account of long-term consequences.

2. Improving the structure of finance

Most OECD countries currently have tax systems that encourage corporate funding through loans rather than equity (Figure 8). Tax reform can improve the structure of finance, by reducing this so-called debt bias, which leads to too much debt, and not enough equity. This generates instability, slows growth and compromises investments for the future. Tax reforms to reduce this debt bias will help make finance more favourable to long-term growth. Measures to encourage broad-based participation in stock holdings, for instance a wider application of nudging in pension plans, can allow for a better sharing of the benefits from stock market expansion.

Figure 8. Tax systems favour debt over equity financing

Percentage point difference between the effective average tax rates on equity and debt finance, 2011



Note: The calculations compare the tax implications of debt and equity financing for corporations. In particular, consistent with this corporate- rather than investor-level perspective, the calculations do not account for the taxation of interest payments, dividends and capital gains in the personal income tax.
Source: Cournède, B., O. Denk and P. Hoeller (2015), "Finance and Inclusive Growth", OECD Economic Policy Papers, No. 14, OECD Publishing.

Extending value added taxation to deposit-taking and lending would avoid favouring households over businesses in bank lending activities. Empirical evidence provided in this study suggests that a shift in lending from households to businesses should be growth-friendly.

SUGGESTED FURTHER READING

The main papers providing background to this note are:

Cournède, B. and O. Denk (2015), "Finance and Economic Growth in OECD and G20 Countries", OECD Economics Department Working Papers, No. 1223, OECD Publishing, Paris.

Cournède, B., O. Denk and P. Hoeller (2015), "Finance and Inclusive Growth", OECD Economic Policy Papers, No. 14, OECD Publishing, Paris.

Denk, O. (2015), "Financial Sector Pay and Labour Income Inequality: Evidence from Europe", OECD Economics Department Working Papers, No. 1225, OECD Publishing, Paris.

Denk, O. and A. Cazenave-Lacroutz (2015), "Household Finance and Income Inequality in the Euro Area", OECD Economics Department Working Papers, No. 1226, OECD Publishing, Paris.

Denk, O. and B. Cournède (2015), "Finance and Income Inequality in OECD Countries", OECD Economics Department Working Papers, No. 1224, OECD Publishing, Paris.

Denk, O., S. Schich and B. Cournède (2015), "Why Implicit Bank Debt Guarantees Matter: Some Empirical Evidence", OECD Journal: Financial Market Trends, Vol. 2014/2, OECD Publishing. DOI: http://dx.doi.org/10.1787/fmt-2014-5js3bfznx6vj

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