Forecasting dividends paid to households

Dividends paid to households represent approximately 3% of gross disposable income (GDI). This proportion has seen a trend increase over several decades, but it is proving to be more and more volatile. This Focus presents the methodology used in Conjoncture in France to forecast changes in the amounts of dividends paid to households, based on an error correction model. In the long term, the trend in dividends at aggregate level is explained by the gross operating surplus (GOS) of companies. In the short term, beyond GOS, the overall trend is relatively well forecast using the variations in the dividends paid only by the companies listed on the CAC40. It can also depend on exogenous parameters, relating to tax in particular. In 2018, dividends paid to households rose sharply, and this growth contributed +0.5 percentage points to the increase in GDI. For 2019, the model predicts an increase of 8%, representing a contribution of +0.2 points to growth in GDI.

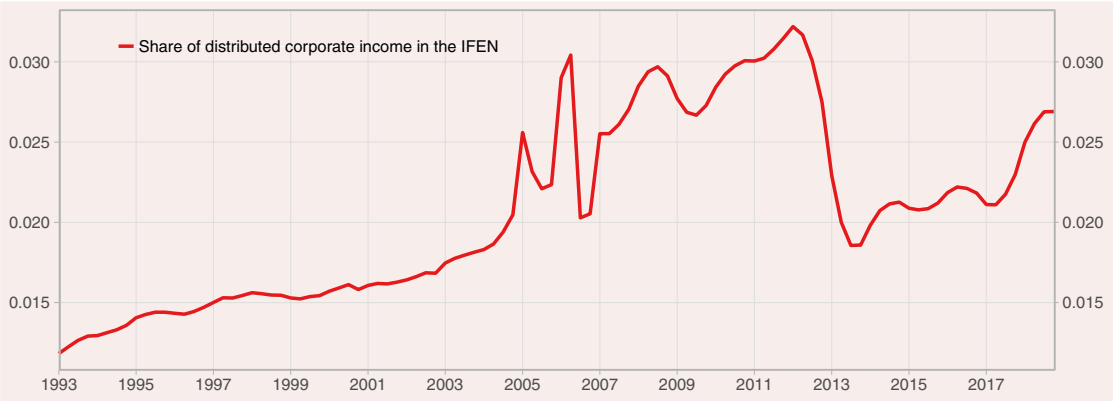
The share of dividends in household income has seen a trend growth since the 1960s

When households make the financial or natural assets they own (land, subsoil assets, etc.) available to other institutional units, they receive income from property. A part of that income is paid in the form of dividends, which include all kinds of distribution of company profits to holders of property title in them. The particularity of dividends is that they do not correspond to a fixed or predefined income[1]. Whilst over the last 30 years the share of dividends paid to households in gross disposable income has more than doubled (*Graph 1*), reaching 2.7% in the last quarter of 2018, that of net interest (on deposits or debt securities) and that of investment income attributed to policyholders, such as from life insurance, has fallen (*Graph 2*). At the end of 2018, the share of net interest was virtually nil (compared to 1.0% in 1998) and that of investment income attributed to policyholders amounted to 3.3% (compared to 5.7% in 1998).

1. Dividends (coded D42 in the national accounting classification) also include shares distributed to shareholders, income paid to government entities by public enterprises with a legal personality, and finally income generated by non-observed activities and transferred to the owners of the enterprises taking part in these activities on their own behalf.

1 - Trend in the share of dividends paid to households in gross disposable income

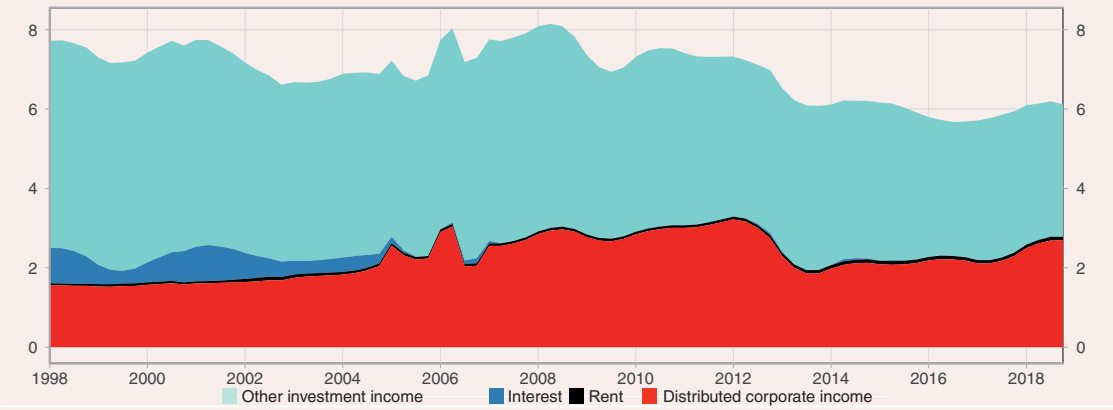
in %



Source: INSEE, quarterly national accounts

2 - Share of property income in households' GDI

in %



Source: INSEE, quarterly national accounts

From the point of view of companies, dividends constitute one of the methods of distribution of gross operating surplus (GOS), that is, value added minus the compensation of employees and "other taxes on production". GOS is also partly allocated to the payment of interest on any previously incurred debt, to the payment of tax and to certain other transactions. The rest of GOS constitutes the enterprise's savings intended for use, for example, for self-financing. Between 1990 and 2005, the share of dividends in GOS was relatively stable. In other words, growth in dividends followed that of GOS (*Graph 3*). From 2008, the economic crisis led companies to increase their savings in order to reduce their debt, leading to a fall in the share of dividends in GOS, accentuated by the tax measures taken in 2012-2013.

A more volatile trend in dividends in the recent period

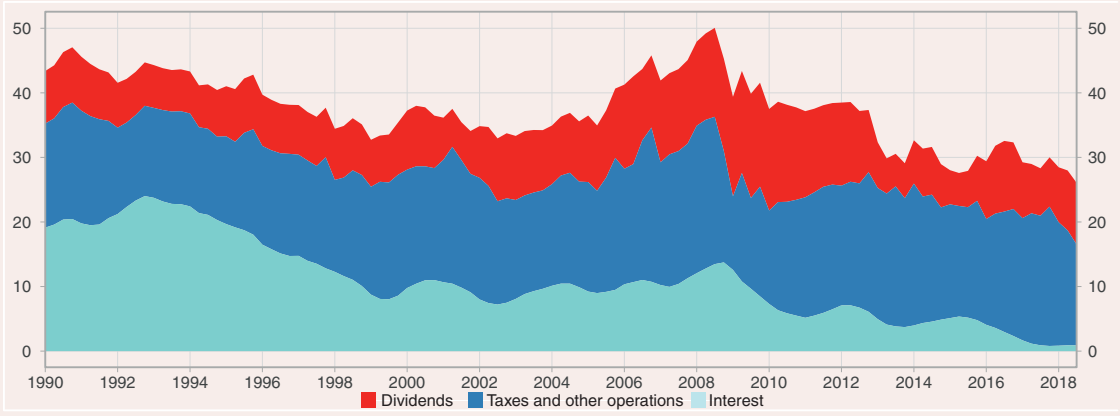
Since 2005, the trend in dividends has become slightly dissociated from that of GOS and the volatility has tended to increase (*Graph 4*). First of all, the economic crisis of 2008 affected enterprises' earnings and dividends more than other operations, where dividends bore the brunt of unfavourable trade-offs. Conversely, during periods of recovery, growth in dividends was more vigorous than that of income and other expenditure. Next, a number of exogenous shocks such as tax measures concerning property income also contributed to this volatility, for example in 2005 with the abolition of the tax credit on dividends. In 2012-2013, several measures concerning dividends were adopted as part of an alignment of the taxation of capital with that of labour. The flat-rate withholding tax (PFL) was cut and the deductible part of the general social contribution (CSG) was reduced. This meant that the share of dividends paid to households in their gross disposable income fell to a level below 2% in 2013 after reaching its record high of 3.2% in 2011. Conversely, in 2018, dividends surged strongly after a year 2017 characterised by good economic results and no doubt also in connection with the introduction of the single flat-rate withholding tax (PFU).

Dividends that are volatile, but close to those paid by large French companies

French households also receive dividends from foreign companies. This is why the dividends received by households differ slightly from the dividends paid by French companies. Nonetheless, these two series of dividends are very closely correlated (coefficient close to 0.7). In addition, the dividend payment behaviour of French CAC 40 companies seems to reflect quite well

3 - Share of interest, dividends and taxes in companies' GOS

annual variations in %



Source: INSEE, quarterly national accountsE

4 - Trend in dividends and GOS

annual % changes

Source: INSEE, quarterly national accounts

the short-term fluctuations in the payments made by all French companies. This approximation (*Graph 5*) remained valid when the various exogenous shocks mentioned above occurred, and in particular when dividend payments fell in 2009 after the crisis and when they rose in 2018. Thus, the CAC40 dividends can therefore be useful in forecasting the dividends received by households.

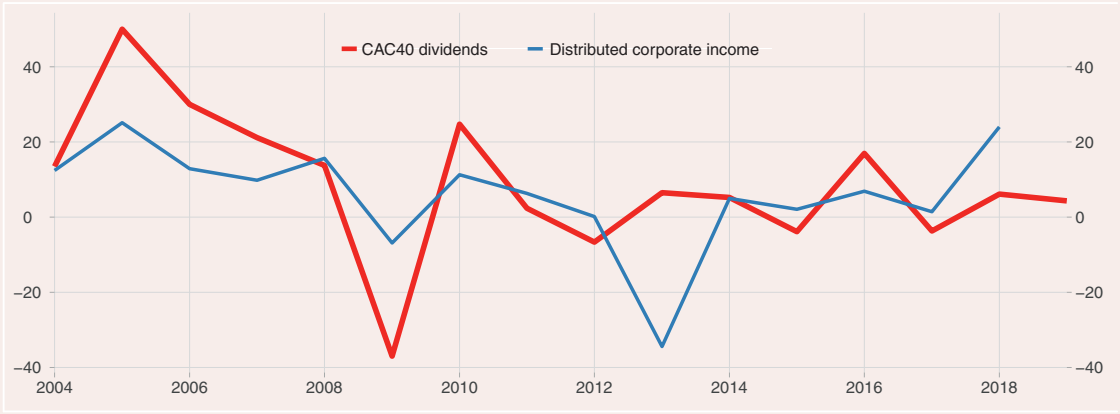
Estimates of dividends for 2019

All these elements are used to deduce an error correction equation to estimate dividends paid to households (*Method*). As mentioned above, the trend in dividends paid by companies follows that of GOS over the long term. In addition, a break occurred in the trend in 2013 under the effect of tax measures. Finally, short-term variations are partly determined by those in the dividends of CAC40 companies as well as, to a lesser degree, those in GOS (*Graph 6*).

In 2018, the annual growth in dividends predicted by the model was 12%. The gap between the trend in dividends forecast by the model and the particularly buoyant increase observed (+24%) is no doubt due once again to a tax scheme, in this case the single flat-rate tax (PFU), which by reducing the tax payable, led to a substantial unleashing of dividend payouts. In 2019, this process is assumed to be largely over and the absence of any new tax measures on dividends means it can be assumed that they will return to a trend in line with their usual determinants. Dividends paid to households are therefore expected to rise by 8% in 2019. The share of dividends in GDI being about 2.6%, the contribution of dividends to GDI growth in 2019 is estimated at +0.2 percentage points, after +0.5 points in 2018. ■

5 - Correlation of the trends in dividends

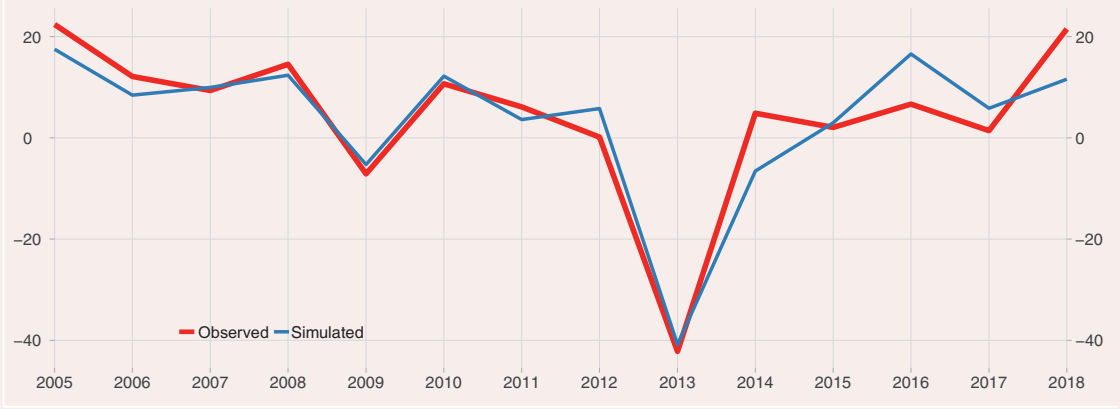
annual variation in %



Source: INSEE, quarterly national accounts, Zonebourse.com

6 - Annual variation in dividends paid to households and forecast by the error correction model

annual variation in %



Source: INSEE, quarterly national accounts, Zonebourse.com

Method

The model used to forecast dividends paid is an error correction model. The existence of a cointegrating relationship between dividends paid to households and companies' GOS suggests a simple long-term relationship. This long-term relationship, however, was interrupted due to a change in tax regime in 2013, modelled by the introduction of an indicator variable with a value of 1 when the observation date is after 2013. A GOS interaction variable was tested from 2013 onwards, then removed as it did not appear to be significant. In addition, in the long run, companies' dividend payment behaviour has changed to favour higher savings and self-financing. The increase in the share of dividends in GOS is captured by a trend over the entire period from 2003 to 2018. The short-term relationship is determined by variations in the dividends paid by the CAC40 companies and by variations in GOS. The equation for annual data since 2003 is therefore (*Graph 6*):

$$\Delta d42_t = 1{,}5 + 0{,}77\,\Delta ebe_{t-1} + 0{,}25\,\Delta cac40_t - 0{,}75 \times (d42_{t-1} - 0{,}93\,ebe_{t-2} - 0{,}04 \times T + 0{,}50 \times I_{t>2013}) + \epsilon_t$$

d42 (or cac40) is the logarithm of dividends paid annually to households (or paid by CAC40 companies), ebe is the gross operating surplus of French resident non-financial corporations. All the coefficients are significant at the 5% threshold.

The pull-back force of the long-term relationship reflects the speed of adjustment of dividends when these diverge from the long-term trend defined by GOS. Its high value (0.75) means that the gap between the short-term fluctuations in dividends and their long-term determinants is to a large extent eliminated within one year, reflecting companies' capacity to adjust their dividends to shocks. For example, the sharp rise in dividends in 2016, linked to companies' good results, was followed by a return to normal in 2017. The long-term elasticity of dividends to GOS is virtually unitary (0,93). The R^2 of the short-term relationship, used for forecasting purposes, stands at 0.94. The equation predicts an increase of 11.6% in dividends in 2018 and 7.9% in 2019. ■