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COMMISSION STAFF WORKING DOCUMENT

Implementing the new methodology for product market and sector monitoring: Results of a first sector screening

Accompanying document to the

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

A single market for 21st century Europe

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EXECUTIVE SUMMARY

This working paper accompanies the Commission Communication "A Single Market for 21st Century Europe" adopted on 20 November 2007 and as such is a contribution to the Single Market Review of the European Commission. The Communication and its proposed actions are based on the new governance principles for the Single Market, which were presented by the Commission in its interim report on the Single Market Review[1]. Market monitoring can be considered as one of the main new policy instruments presented in the Commission Staff Working Paper on "Instruments for a modernised Single Market policy", which also accompanies the Communication on the Single Market Review.

A more systematic and integrated approach to monitor the functioning of key goods and services markets is one of the main components of the new strategy for the Single Market, which aims at delivering more evidence based and impact driven policies. By investigating the nature of market malfunctioning in the sectors that are the most important for growth, job creation, household consumption and adjustment within the Single Market, the market monitoring could contribute to unleash the Internal Market's full potential and to design more effective policy instruments. The objective of the proposed new approach to product market and sector monitoring therefore is to improve our knowledge of the functioning of markets. This should enable more consistent and better targeted policy making.

To improve the governance of the Internal Market, the Commission services developed a new approach for the organisation of product market and sector monitoring within the European Union (EU). The approach proposed is flexible and draws on existing experience within the Commission services and the Member States. It includes two stages. The first stage consists of a screening aimed at identifying a relatively limited number of sectors offering the greatest potential benefits for market monitoring. However, this does not exclude to analyse non-selected sectors for specific needs and this does not call into question the need for possible

[1] European Commission (2007), "Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions: A Single Market for Citizens", Interim report to the 2007 Spring European Council, February.

policy action in these other sectors. In the second stage, the selected sectors are examined in detail, with the aim of investigating more in depth the causes of market malfunctioning and of identifying appropriate reforms to address this market malfunctioning. This second stage is not covered by this working paper.

This paper presents the preliminary results of the screening on the basis of the methodology defined in the "Guiding principles for product and market monitoring"[2]. Using a small set of key indicators the screening identifies the sectors which are economically important from a static and dynamic perspective, which play a crucial role for the adjustment capacity of the European economy and where there are signs of market malfunctioning from the perspective of businesses or consumers. The sectors have been defined using the NACE 2 digit level, in order to take into account the data availability, with the consequence that some sectors are not analysed with the desired level of disaggregation, like for instance the sector "Post and Telecommunication". The Commission services seek to develop additional indicators to be used for sector screening as new and better data become available, for instance on consumer satisfaction and consumer complaints, price stickiness or the degree of competition in the sector. In time, additional information should also be provided by the Consumer Markets Scoreboard that is being developed by the Commission. In addition, a number of robustness checks will be carried out. Therefore, the implementation of the new methodology for product market and sector monitoring is still in the learning-by-doing stage and further refinements of the methodology should be envisaged.

The rationale to identify sectors which are economically important is that the greater a sector's contribution to economic activity in the EU, the greater the need to ensure that markets in that sector are functioning well and the greater the returns of policy intervention to remedy possible problems. From a static perspective we identify the sectors with the largest contribution to total value added, employment and consumption, and from a dynamic perspective the sectors that are key to the future growth of the EU on the basis of a proxy for the dynamism of world demand. Most of the selected manufacturing sectors belong to low and medium tech intensive sectors such as chemicals, fabricated metals and motor vehicles but some high tech intensive sectors such as communication equipment and medical instruments are also included in the list. The services sectors selected are mainly distribution activities, telecommunication and postal services, financial services, other business services and construction.

A second group of criteria aims at analysing the contribution of the sectors to the adjustment capacity of the European economy. The objective is to assess the extent to which the functioning of markets is sufficiently flexible and innovative to allow an endogenous and smooth adjustment to changing economic conditions. This is done on the basis of three criteria measuring: (i) the interlinkages of the sector with the rest of the economy, since the stronger these interlinkages, the more important are the repercussions of the performance of the sector on the rest of the economy; (ii) the contribution of the sector to the development, absorption and diffusion of new technologies, as this helps to promote greater economic efficiency and competitiveness; and (iii) the contribution of the sector to price adjustment as price stickiness hampers the reallocation of resources across activities and reduces the pass through of cost reductions to consumers. New data sets have been used to select the sectors on the basis of these criteria. For example, the linkages of a sector with the downstream and

[2] European Commission (2007), "Guiding Principles for Product Market and Sector Monitoring", European Economy, Occasional Papers, number 34, June.

upstream industries have been computed on the basis of a methodology developed by the IPTS, using an input-output table for the EU27. The analysis of the contribution of the sector to price adjustment needs to further developed in the future on the basis of price data collected by the Inflation Persistence Network of the ECB which can be used to identify the sectors suffering form higher price stickiness, which can be detrimental to consumers in particular. Sectors which emerge as key for the adjustment capacity of the European economy include medium-tech manufacturing industries, such as machinery, chemicals, metal industry, sectors specialised in the production of ICT, such as computers, communication equipment and services such as network industries (transport, telecommunications), distribution activities, financial services and business services.

The market malfunctioning criterion is analysed from a business and a consumer perspective. From a business perspective, productivity growth performance is used as a proxy of market efficiency. Given the similarities in terms of factor endowments and technological development, the US productivity growth performance in a given sector is used as the benchmark against which we evaluate the productivity performance of the EU in that same sector. The gap in productivity growth vis-à-vis the US is particularly important in the services sectors. With respect to manufacturing, the largest gaps in productivity growth vis-à-vis the US can be found in the technology-intensive sectors like electrical equipment. However, productivity growth also lags behind the US in more traditional sectors such as textiles, clothing and footwear as well as in medium-technology sectors like in motor vehicles where the EU traditionally holds comparative advantage. From a consumer perspective, results of surveys, such as the 2006 Consumer Satisfaction Survey and the 2006 public consultation on the future of the Single Market, have been used to identify sectors presenting signs of malfunctioning. However, only very partial data on user satisfaction are available. On the basis of this limited information, post and telecommunications, transport, financial services and energy emerge as sectors where there seems to be room for improvement in terms of market functioning from the point of view of users.

Finally, the following selection strategy was adopted. First, we identified all the sectors that show problems in terms of market functioning from an economic and consumer point of view. Out of these we selected the sectors that are either important for the current and future growth and job creation or important for improving the adjustment capacity of the EU economy. On the basis of this selection strategy, we have identified 23 sectors which are almost evenly distributed between manufacturing and services. These sectors account for 44.5% of EU value added and 46.5% of EU employment. The selected manufacturing sectors are mostly sectors producing intermediary and equipment goods. The selected services sectors belong mainly to the distribution (retail, wholesale, transport, hotels and restaurants) activities and other business services. Other network industries such "post and telecommunications" and "electricity, gas and water supply" are also included.

Second, a sub-group of the selected sectors emphasises the role of adjustment. For this, a stricter selection strategy was adopted that imposes that all the selected sectors are economically important, show signs of market malfunctioning from an economic and consumer perspective, and contribute importantly to improve the adjustment capacity of the EU. According to the methodology adopted the latter means that these sectors do not only have important interlinkages with the rest of the economy but also that these interlinkages should be vehicle for the diffusion of ICT across the EU economy. This more narrowly defined set of 9 sectors accounts for 26% of EU value added and 28% of EU employment. The majority of these industries are services sectors that use ICT intensively. They include distribution activities, financial services, post and telecommunications and professional

services. Regarding manufacturing industries, there are two ICT producing sectors (electrical machinery and radio, TV and communication) and one ICT intensive user (machinery).

The working paper concludes with a short discussion of the follow-up. Two main avenues for further work are proposed. First, a preliminary analysis of the main causes for market malfunctioning has been made for the selected sectors. Different reasons for market malfunctioning have been investigated, such as lack of openness/integration, low degree of competition, poor regulatory environment and insufficient capacity of innovation. This could also give insights into which consistent policy strategy would better address the particular challenges of a given sector.

Second, the results of the sector screening may serve as a basis for a medium term work programme of in-depth market monitoring exercises commonly agreed between the Commission services. In some selected sectors, such as energy and financial services, the Commission has already conducted in-depth monitoring exercises, while in others, such as post and telecommunications the Commission has recently proposed regulatory reforms that address problems identified. The results of the top-down sector screening presented here therefore are broadly in line with the current focus of EU policies. In these situations where problems have already been identified and addressed there is no immediate need to carry out an in-depth market monitoring under the methodology presented in this paper.

This in-depth market monitoring could be used as a strategic tool to help define the priority measures for a better functioning Single Market. The implementation of a better coordinated approach to market monitoring would help improve the consistency of policy proposals and actions carried out in the different Commission services involved. The Commission intends to work closely with national authorities and Member States to implement this new approach. In light of this it would be desirable to develop the analysis at the national level. This work would greatly benefit from the involvement of and an exchange of experience with national monitoring authorities. First contacts have already been taken and proved to be very fruitful.

1. INTRODUCTION

This working paper accompanies the Commission Communication "A Single Market for 21st Century Europe" adopted on 20 November 2007 and as such is a contribution to the Single Market Review of the European Commission. The interim report to the Spring European Council (European Commission, 2007b)[3] reviewed the achievements of the Single Market of the last twenty years and set out the way forward to deliver further benefits for citizens and business and contribute to a more competitive and sustainable Europe. The final Communication aims to redefine the Single Market strategy to give it new impetus and deliver more evidence based and impact driven policies.

The new strategy for the Internal Market is based on two main elements: first, a concrete agenda of policy measures to tackle the areas where the Single Market is still not fully accomplished; second, a new approach for the governance of the Internal Market which is better suited to the challenges that the EU faces nowadays. In this light the Commission proposes that the focus of the Single Market should shift from its initial emphasis on removing barriers to cross-border trade to one of ensuring that markets function better, to the benefit of citizens and business. In particular, the aim is to make Single Market policy:

- *More impact-driven and result oriented*: the EU should act when markets do not deliver and where it will have a maximum impact. It should better anticipate the effects of structural adjustment and assess its consequences.

- *More targeted and better enforced*: a more diverse and flexible mix of instruments should be employed, finding the right balance between harmonisation and mutual recognition of rules, and other tools such as self- and co-regulation.

- *More decentralized and network-based*: Brussels cannot deliver alone. It is therefore necessary to rethink how to improve the ownership of the Single Market in the Member States and the cooperation between the national and EU level.

- *More accessible and better communicated*: a lot can be done to improve communication and publicise the opportunities offered by the Single Market.

Given the new objectives of the Single Market for the 21st century, market surveillance has moved to the centre of policy making. Better Single Market regulation depends on a better understanding of the obstacles preventing markets from functioning well. It implies moving from a largely legalistic approach to a more economic approach to policy making that is based on the monitoring of markets. Market monitoring can be considered as one of main new policy instruments presented in the Commission Staff Working Paper on "Instruments for a modernised Single Market policy", which also accompanies the Single Market Review Communication.

A first step of this monitoring consists of the screening of key sectors that are the most important for growth, job creation, household consumption and adjustment within the single

[3] European Commission (2007), "Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions: A Single Market for Citizens", Interim report to the 2007 Spring European Council, February.

market and where there are signs of malfunctioning[4] from an economic and consumer perspective. By investigating the nature of the problems that are responsible for market malfunctioning in these sectors, this market monitoring could contribute to define the reform agenda of the coming years aimed at unleashing the Internal Market's full potential by allowing the design of more effective policy instruments aimed at creating more open, competitive and innovative markets that generate benefits for all citizens.

The Commission has experience with market and sector monitoring that has been used as a basis for policy shaping and policy implementation. In the framework of the Internal Market Review, the Commission is considering a more systematic and integrated approach for the monitoring of the functioning of key goods and services markets. This approach would also bring the governance of the Single Market closer to the citizens. Deepening the Single Market implies the opening up to competition of sectors (such as the services sectors) that are politically sensitive because it directly affects the employment of a large number of people. In order to be more responsive to the expectations and concerns of citizens and small businesses, and thereby increase the acceptability of further reforms, it is critical to have a better understanding of the overall effects of the reforms proposed as well as to ensure the close monitoring of the effect of the reforms undertaken.

Hence, the Commission services have developed a new approach for the organisation of product market and sector monitoring within the European Union (European Commission, 2007)[5]. The approach proposed is flexible and draws on existing experience within the Commission services and the Member States allowing continuous improvements through a learning-by-doing process. This proposed methodology is currently being implemented by the Commission and the results of the application of this methodology are presented in this working paper. It should be clear that the sector screening presented here is still evolving. In particular, the Commission services intend to consider alternative indicators to be used for sector screening as new and better data become available, for instance on consumer satisfaction, consumer complaints, price comparisons or the degree of competition in the sector. In addition, a number of robustness checks will be carried out. Further refinements of the methodology can be envisaged.

Finally, it is important to stress that the main objective of the screening is to select key sectors on the basis of an agreed methodology and, in a second step, to examine in more detail the selected sectors with the view of using in a consistent way available horizontal instruments to face the challenges that these key sectors are facing. However, this does not exclude the analysis of other (non-selected) sectors if it is considered necessary for specific purposes. Furthermore, the results of this screening do not call into question the need for policy actions in other sectors.

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4 For the purposes of this document, market malfunctioning should be understood in the broad sense, i.e. as evidenced by a group of specific indicators set out in the document. It does not necessarily correspond to the narrower economic notion of "market failure" describing the condition where the allocation of goods and services by a market is not efficient (Pareto-efficiency).

5 European Commission (2007), "Guiding Principles for Product Market and Sector Monitoring", European Economy, Occasional Papers, number 34, June European Commission (2007). "Guiding Principles for Product Market and Sector Monitoring", March.

2. OBJECTIVES AND RATIONALE OF THE MARKET AND SECTOR MONITORING

2.1. Objectives

The relaunched Single Market will place more emphasis on a more impact driven policy approach that is based on a better understanding of markets. In order to ensure such better understanding, the market monitoring exercise aims to improve market surveillance. The objective of the proposed new approach to product market and sector monitoring is to improve our knowledge of the functioning of markets in order to enable more consistent and better targeted policy making.

Market monitoring consists of two steps:

- The first step is a horizontal screening aimed at identifying a relatively limited number of sectors offering the greatest potential benefits from market monitoring. Using a small set of key indicators the screening identifies the sectors which are economically important from a static and dynamic perspective, which play a crucial role for the adjustment capacity of the European economy and where there are signs of market malfunctioning from the perspective of businesses or consumers. A first analysis of the potential causes of the market malfunctioning and of the relevant policy intervention will also be made.

- In a second step the selected sectors are examined in more detail, with the aim of identifying the actual causes of market malfunctioning and the appropriate instruments to address this market malfunctioning. This second step is not covered by the present report.

The screening and analysis which are carried out in this report will allow us to:

- Identify markets and sectors which are important for growth and adjustment in the EU.

- Identify the existence of market malfunctioning within the Internal Market.

- Offer some insights into the causes of market malfunctioning.

The sector screening could contribute to improve efficiency and consistency in the future design of horizontal policy instruments and help address Single Market problems being faced by EU citizens.

2.2. Rationale

Well functioning markets are essential to improve job creation, growth and adjustment within the Internal Market and respond to citizen's everyday concerns. Well functioning markets are efficient and contribute to lower prices and better quality products for consumers. Market efficiency gains can be made through three main channels. First, a better allocation of resources means that more productive firms increase their market share at the expense of less productive firms. Second, competition has a corrective effect on the behaviour of managers and workers, leading to a greater efficiency in the organisation of work. Third, stronger competition provides an increased incentive for producers to innovate. However, these potential efficiency gains will only be passed on to consumers in terms of lower prices, better quality, and wider choice if product markets are flexible. Well functioning markets are also crucial to improve the adjustment capacity of the economy to the changing demand and supply conditions. They ensure that companies adjust their prices, which in turn facilitates the reallocation of resources to new sectors and activities.

Moreover, a better monitoring of sectoral developments and market functioning should help to identify bottlenecks that prevent Europe from taking full advantage of the opportunities of technological progress and market opening worldwide. It should also help to define a more consistent approach (involving various policy tools) to better tackle the problems identified. The proposed approach involves two distinct stages of analysis in order to optimise the use of resources as the experience within the Commission shows that market monitoring is time and resource consuming. Therefore in a first stage all efforts are put in a screening exercise aimed at selecting a few priority sectors which will be monitored in more detail (possibly at the level of markets) in a subsequent stage both by the Commission services and by the Member States.

Within this context, the market screening exercise can contribute to two main political outcomes. First, it may help to better define the structural reform agenda within the context of the Single Market Review and the Lisbon Strategy. Second, it can lead to the implementation of a closer surveillance of those markets/sectors having a substantial impact on growth and adjustment of the EU economy and real outcomes for citizens and which present signs of malfunctioning.

3. SECTOR SCREENING

The first stage of the monitoring exercise involves a *screening* exercise aimed at selecting on the basis of clear criteria a limited number of important and potentially malfunctioning sectors, which should be monitored in more detail preferably at the level of markets in a second stage of analysis. This two-step approach allows policymakers to concentrate efforts where they can have a priori the highest returns and to increase the efficiency of policy interventions by addressing the problems where they lie.

In the first stage of the methodology, we screen all the sectors of the economy on the basis of three criteria: (i) economic importance; (ii) contribution to the adjustment capacity of the EU; (iii) signs of market malfunctioning. This screening should be relatively easy to implement by drawing on a limited number of publicly available indicators. The analysis is made at a fairly aggregated level, at the two-digit level of the NACE industrial classification, and focuses exclusively on market-based sectors excluding the following services sectors: health (N), education (M), government (L) and real estate (70)[6]. Furthermore we also exclude the primary sectors. In total, the analysis covers 47 sectors, see full list in table A in Annex 1.

The present report is limited to the first stage of the exercise which refers to the screening of sectors. In light of the inevitable data limitations this exercise will not be implemented in a mechanistic fashion. The second stage of the project, the in depth-monitoring of product markets, should be carried out at a more disaggregated level. Depending on data availability optimally this would be the market level.

4. THE SELECTION CRITERIA

4.1. Contribution to growth and jobs

The objective of including this criterion in the screening is to identify the sectors that contribute the most to economic activity and jobs in the EU. The rationale is that the greater a sector's economic importance, the greater the need to ensure that markets in that sector are

[6] We adopt the list of market-based sectors that is used by the EUKLEMS consortium.

functioning well and the greater the returns of policy intervention to remedy possible problems.

To assess the economic importance of the different sectors a two-fold approach is adopted. First, ***from a static perspective,*** we identify the sectors with the largest contribution to total value added, employment and consumption expenditure[7] on the basis of the relative share of each sector in their respective totals in the EU-25 in 2004[8.] The methodology applied involves normalising and adding up the series of the sectoral contributions to total value added, employment and consumption expenditures. The sectors that are above the median of the resulting series are identified as the most economically important (from a static perspective).

Second, ***from a dynamic perspective,*** we identify the sectors that are important for the future growth of the EU. For manufacturing and traded services, the average annual world export growth rate between 1999 and 2005 is taken as a proxy of the dynamism of world demand in that sector. We consider sectors to be important for the future economic growth of the EU those whose export growth rates are higher than the world average in the analysed period. *A priori* these sectors have higher potential to fuel growth in the future. It is therefore important to ensure that there are no restrictions to good market functioning. For the non-traded services sectors (the sectors for which trade data are not available) the dynamic perspective can be captured by the share of the sector in total EU-25 inward and outward FDI stock in 2004. The reasoning behind the use of this proxy is that the intensity of FDI activity in the non-traded sectors (where the setting up of foreign subsidiaries is the main strategy available for firm's wishing to internationalise operations) reflects firms' efforts to benefit from growing demand and perceived market opportunities[9]. Hence, a high contribution of a sector to total FDI stocks can be interpreted as a sign of important economic dynamism in that sector[10]. However there is an important drawback in using these data which is related to the fact that they do not allow sectoral disaggregation at the NACE 2 digit level[11].

Table 1 lists the sectors that can be identified as being the most economically important on the basis of both the dynamic and the static criteria[12]. Regarding the selected manufacturing

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7 The share of each sector in total final consumption expenditure by households was computed with data from the EU-27 symmetric input-output tables available for 2000, developed by the Institute for Prospective Technological Studies of the Commission's Joint Research Centre.

8 The EUKLEMS data set is a main source of information as it provides a comprehensive set of comparable sector-level data for the EU-25, individual Member States, as well as the US and Japan. Other data sources include COMTRADE (trade data) and Eurostat. At this state of the screening process the results should be interpreted with caution with respect to the possible impact of ICT deflators on labour productivity growth and value added at constant prices (given the differences in the methods of calculation). In a next stage the scope and the magnitude of the differences could be examined in more detail.

9 Market opportunities in the EU economy are captured by inward FDI activity while market opportunities abroad are captured by outward FDI activity.

10 The analysis is based on FDI stocks which being an accumulation of yearly flows provide a clearer picture of the importance of a given sector in terms of FDI activity over time.

11 In particular, regarding the sectors that we are looking at specifically we have only data for the distribution sector (aggregation of the 50-51-52 NACE sectors) and for financial intermediation (aggregation of the 65-66-67 NACE sectors). This makes discriminating and comparing sectors particularly difficult. Nonetheless on the basis of these data one could say that the distribution sectors, transport (60 and 63), telecommunications as well as financial services seem to reveal the greatest dynamism.

12 To prevent a too mechanical approach to this screening exercise we include some sectors that while do not fully meet both the static and dynamic criteria adopted, are nonetheless close to the defined thresholds. The sectors 15, 34 and 74 are clearly above the median of the share of employment and

sectors, it is striking that many belong to what is usually considered to be the low and medium technology intensive sectors, for example "Food and beverages", "Chemicals and chemical products", "Basic metals", "Fabricated metals" and "Motor vehicles, trailers and semi-trailers". However, some high technology intensive sectors are also included in the list namely "Radio, television and communication equipment" and "Medical, precision and optical instruments". The services sectors selected are mainly distribution activities, telecommunication and postal services, financial services, other business services and construction. Overall these sectors represent a substantial part of the EU economy, namely 52% of valued added and almost 54.6% of total employment.

Table 1 - Contribution to growth and jobs

	Share in total EU25 value added	**Share in total EU25 employment**	**Share in EU27 final consumption expenditure**	**World export growth**[13]
MANUFACTURING AND TRADED SERVICES				
15 - Food and beverages	1.9	2.2	8.7	7.3
24 - Chemicals and chemical products	1.9	0.9	1.6	12.2
25 - Rubber and plastics	1	0.8	0.4	8.2
27 - Basic metals	0.7	0.5	0	12
28 - Fabricated metal	1.8	1.9	0.3	8
29 - Machinery	2.1	1.7	0.7	8
31 - Electrical machinery and apparatus, nec	0.9	0.8	0.2	7.5
32 - Radio, TV and comm. equipment	0.5	0.4	0.6	8.5
33 - Medical, precision and optical instruments	0.6	0.5	0.2	10.6
34 - Motor vehicles, trailers and semi- trailers	1.4	1.1	3.4	7.5
E - Electricity, gas and water supply	2.2	0.7	2.3	20.8
74 - Other business activities	7	8.8	0.8	7.2
NON TRADED SECTORS[14]				

value added but the world export growth rates in these sectors are slightly below the world average (8.5%). In sectors 27, 33 and 32 the world export growth rates are higher than the world average but these sectors are slightly below the median contribution to total employment and value added. Finally, sector 31 is also included because it is only slightly below the defined thresholds for both contribution to employment and value added and for world export growth.

13 Average annual growth rates over period 1999-2005 (%). Source: COMTRADE.

14 Non-trade sectors are those for which no trade data are available.

	Share in total EU25 value added	Share in total EU25 employment	Share in EU27 final consumption expenditure	Share of the sector in total EU25 inward and outward FDI stock in 2004
F - Construction (*)	6.2	7.1	0.8	0.4
50 - Sale, maint. and repair of motor vehicles	1.7	2.2	3.8	5.2
51 - Wholesale trade and commission trade	3.6	4.4	5.8	5.2
52 - Retail trade	4.3	8.5	9.9	5.2
H - Hotels and restaurants (*)	2.2	4.5	8.8	0.6
60 - Inland transport	2.6	2.7	2.6	1.2
63 - Supporting and aux transport activities	1.8	1.3	1	1.4
64 - Post and telecommunications	2.4	1.4	2.4	2.9
65 - Financial intermediation	4.1	1.7	1.3	44
66 - Insurance and pension funding	1	0.5	2.9	44
TOTAL SELECTED SECTORS	51.9	54.6	58.5	

(*) Even if the construction (F) and hotels and restaurants (H) sectors do not seem important from a dynamic perspective (based on the share of the sector in total EU25 inward and outward FDI stock indicator), we have maintained them in the list of sectors which are economically important at this stage of the exercise. The reason is that both of these sectors have high employment growth compared to the average employment growth of non-traded services sectors.

4.2. Contribution to adjustment capacity

A key dimension to assess the functioning of markets is the extent to which they are sufficiently flexible and innovative to allow the endogenous and smooth adjustment to the changing economic conditions. By adjustment, it is meant the reactions of economic agents to accommodate or take advantage of exogenous changes in external demand or international competitiveness. The mechanisms of adjustment may be macroeconomic or microeconomic and they may operate over the short term or over the longer term.

However, this report does not stress the distinction between short and long-term processes. This distinction is not always clear in practice and there are important interactions between the two processes. In the longer term, adjustment concerns the correction of production capacity, reallocation of resources between economic activities, and efforts to increase efficiency and innovation. These mechanisms however depend on a wide number of structural factors that equally determine the underlying short-term adjustment processes, namely the overall economic environment in which firms function (in particular labour market institutions, capital markets, regulation and the innovation system). Moreover, given that the ultimate aim of the current exercise is the functioning of markets, the focus will be put on the microeconomic channels of adjustment. These are particularly important for the euro area countries given that in case of asymmetric shocks they can not use many of the instruments to

steer the macroeconomic channels of adjustment, namely exchange rate and monetary policies.

Given the wide range of factors that determine the short run and long run microeconomic adjustment capacity of the EU economy the aim of the screening exercise at this stage is not to identify the importance of each but to identify which sectors are pivotal in allowing the adjustment process to take place. This is done on the basis of three criteria (i) the importance of the interlinkages with the rest of the economy; (ii) the importance for the introduction and diffusion of new technologies; (iii) the importance for the transmission of price adjustments. The rationale for using the first criterion is that the stronger the interlinkages of a sector with the rest of the economy the more important are the repercussions of its market performance (in terms of price/quality/variety of output) on the rest of the economy. In other words, market inefficiencies in these key sectors widely propagate throughout the economy ultimately hampering performance in upstream and downstream sectors. The adoption of the second criterion is justified by the fact that in the long run the adjustment of the EU economy must involve the reallocation of factors towards more technology intensive activities where competitiveness can be sustained. Therefore it is important to identify which sectors are the most important for the production and early adoption of new general purpose technologies, such as information and communication technologies. Finally the third criterion is adopted because of the crucial importance of the mechanism of price formation for the efficient allocation of factors across the economy and for the pass through of cost reductions to consumers. It is important to identify in which sectors prices are stickier as they act as buffers to the transmission of price changes across the economy.

4.2.1. Interlinkages with the rest of the economy

The identification of key sectors is done on the basis of input-output analysis (see box 1)[15]. Using a single symmetric input-output table, the backward and forward multipliers of each sector of the economy are computed[16]. The former capture the linkages of a sector with the upstream industries (industries from which the sector purchases inputs) while the latter capture the linkages with the downstream industries (industries to whom the sector sells inputs). In other words, forward multipliers capture the changes in the downstream sectors' production as a result of a one-unit increase in the value added in a sector while backward multipliers capture the changes in the upstream industries' production driven by a one-unit increase in the final demand of a given sector[17].

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15 For further details on the methodology used, on the results obtained and on the sensitivity analysis see "Joint Research Centre's Institute for Prospective Technological Studies Contribution to the Report on Guiding Principles for Product Market and Sectoral Monitoring".

16 All primary data are from Eurostat; further estimations, where necessary, were developed by Institute for Prospective Technological Studies (IPTS).

17 To illustrate the above one can give as an example the electricity sector. If the electricity sector increases its output, then there will be increased demands from electrical power stations (as purchasers) on the sectors whose products are used as inputs to produce electricity (e.g. coal, crude petroleum or natural gas). This effect would be captured by the backward multipliers of the electricity sector. From a supply point of view, increased output in the electricity sector also means additional amounts of electricity available to be used as input to other sectors for their own production. That is, there will be increased supplies from the electricity sector (as a seller) for the sectors which use electricity in their production. The impact of the increased supply is captured by the supply-side model, which relates gross value added to total output by means of the so-called forward multipliers.

This methodology allows us to classify the different sectors according to the intensity and nature of their interlinkages with the rest of the economy[18]. In this analysis, a sector is considered to be forward oriented if the magnitude of its forward multipliers is greater than the average magnitude of forward multipliers across all sectors of the economy. Likewise a sector is considered to be backward oriented if the magnitude of its backward multipliers is greater than the average magnitude of backward multipliers across all sectors of the economy. On this basis, we can identify "key sectors" as those which are simultaneously backward and forward oriented, i.e. the sectors with the strongest interlinkages across the whole of the economy. Moreover, this analysis allows also the distinction between sectors whose interlinkages are spread over many sectors in the economy and sectors whose interlinkages are concentrated in one or few sectors. Table 2 presents the different types of sectors that can be identified in the economy.

Box 1: Summary of methodology used for the identification of key sectors

The identification of key sectors is a well-known subject in the literature and can be addressed from the demand side, the supply side or from both angles. For the sake of providing a more complete overview, in this paper we have combined both approaches. From the demand side, we can identify those sectors for which a one-unit increase in the final demand of their primary outputs would drive other sectors either in terms of total output, employment or income, by increasing their corresponding intermediate inputs, i.e. backward oriented sectors. The analysis from the supply side reveals those sectors providing the inputs supplied to other sectors as a result of a one-unit increase in their gross value added or, generally speaking, gross domestic product, i.e. forward oriented sectors.

This can be addressed with input-output analysis using a single symmetric input-output table (SIOT). The Joint Research Centre's Institute for Prospective Technological Studies (IPTS) of the European Commission has recently estimated a SIOT of the EU27 for the year 2000 which has been used in this analysis. Backward multipliers are derived from the SIOT representing changes in industry outputs as a result of a one-unit increase in the final demand of a product while the forward multipliers capture the changes in commodity outputs as a result of a one-unit increase in the value added of industries. By taking the two impact multipliers (which include both direct and indirect connections between sectors) together, the key sectors in an economy are identified by comparing the magnitude of their backward and forward multipliers, scaled by the overall prominence of the sector in the economy[19]. The results reported in this note relate only to the analysis done in terms of output although income and employment multipliers have also been computed.

[18] However, computing multipliers is not a straightforward task. Firstly, the analysis shall account for domestic intermediate uses only. Secondly, forward and backward multipliers shall be weighted according to gross value added and final demand shares of sectors, respectively, in order to discriminate against sectors that are too small, in the EU, so that they are relevant for macroeconomic observation.

[19] The forward and backward multipliers are weighted according to gross value added and final demand shares of sectors, respectively, in order to discriminate against sectors that are too small in the EU.

Table 2 - Backward and forward interlinkages: typology of sectors

	FORWARD ORIENTED		NO RELEVANT FORWARD EFFECTS
BACKWARD ORIENTED	Key sectors with widely spread effects	Key sectors but with forward effects concentrated	Backward oriented sectors with widely spread effects
	Key sectors but with backward effects concentrated	Key sectors without widely spread effects	Backward oriented sectors without widely spread effects
NO RELEVANT BACKWARD EFFECTS	Forward oriented sectors with widely spread effects	Forward oriented sectors without widely spread effects	Sectors with weak interlinkages with the rest of the economy

Table 3 identifies the following "key sectors" on the basis of the available data: "Chemicals and chemical products" (24), "Construction" (F), "Recreational, cultural and sporting activities" (92) and distribution, namely "Wholesale" (51) and "Retail" (52). These sectors have important interlinkages with the rest of the economy, i.e. both with upstream sectors (captured by the backward multipliers) and with downstream sectors (captured by the forward multipliers).

Table 3 - Sectoral interlinkages in the EU 27 in 2000

	FORWARD ORIENTED		NO RELEVANT FORWARD EFFECTS
BACKWARD ORIENTED		24, F, 51	15, 29, 34, 50, H, 66
		52, 92	
NO RELEVANT BACKWARD EFFECTS	20, 21, 22, 25, 27, 28, 37, E, 60, 63, 64, 65, 67, 71, 72	26, 74	16, 17, 18, 19, 23, 30, 31, 32, 33, 35, 36, 41, 61, 62, 73, 90, 91, 93

This selection may be broadened to take into account all the forward and backward oriented sectors. Table 4 includes all the sectors which play particularly important roles as a supplier of inputs to the rest of the economy or as a purchaser of intermediary goods from the other sectors of the economy[20].

[20] The JRC has checked the robustness of the results by (1) using equal weights for the different sectors (not to overestimate the sectors for which the share of gross value added and/or the share of final demand over total economy output is large), (2) removing the diagonal of the intermediary input matrix (by eliminating from the analysis the purchases the sectors make from themselves, which can inflate the computed interlinkages of the sectors) and finally (3) changing the adopted threshold to classify a sector

Table 4 - Sectors selected on the basis of interlinkages with the rest of the economy

KEY SECTORS (FORWARD AND BACKWARD ORIENTED)
24 - Chemicals and chemical products
51 - Wholesale trade
52 - Retail trade
F - Construction
92 - Recreational, cultural and sporting activities
FORWARD ORIENTED SECTORS
20 - Wood and cork
21 - Pulp and paper
22 - Printing, publishing and reproduction
25 - Rubber and plastics
26 - Other non-metallic mineral
27 - Basic metals
28 - Fabricated metal
37 - Recycling
E - Electricity, gas and water supply
60 - Inland transport
63 - Supporting and auxiliary transport activities
64 - Post and telecommunications
65 - Financial intermediation
67 - Activities related to financial intermediation

as having important interlinkages, using the median rather than the average. In the original calculations, a sector was considered to have important interlinkages when its multiplier was higher than the average for all sectors of the economy. Using the median would prevent situations where the presence of outliers would determine this result. In general the results were robust to these changes; only the classification of some sectors ("key sectors", "forward oriented sectors", "backward oriented sectors") changes in some situations but not the list of sectors for which there is evidence of interlinkages. The main alteration concerns the sectors "Electrical machinery" (31), "Radio, television and communication equipment" (32), "Medical, precision and optical instruments" (33) that are added to the list of sectors with important interlinkages if the elements of the main diagonal of the intermediate matrix are excluded and the median is used a threshold. This point is however later corrected in the analysis presented in the text when the sectors important for the production of investment goods are taken into account.

71 - Renting of machinery and equipment
72 - Computer and related activities
74 - Other business activities
BACKWARD ORIENTED SECTORS
15 - Food and beverages
29 - Machinery
34 - Motor vehicles
50 - Sales, maintenance and repair motor vehicles
H - Hotels and restaurants
66 - Insurance and pension funding

Finally, some additional analysis is made regarding investment goods. While the analysis presented thus far allows us to map the importance of direct and indirect interlinkages between all sectors across the economy by relying on the cross sectoral consumption of intermediate goods, this may not fully capture all important interlinkages that can be established between some sectors with the rest of the economy. This is particularly true for the sectors that produce investment goods. The importance of these sectors can be underestimated given that the consumption of investment goods is not captured by demand for intermediary goods (the basis of the input output relationships established so far) whereas this is rather an important component of final demand. Table 5 shows the top 11 ranked sectors[21] in terms of the importance of investment demand over total output. It shows for example that in the construction sector 66% of the total output is absorbed by investment demand in the economy. It is important to notice that many of the sectors generally specialised in the production of information and communication technologies (ICT) such as "Office machinery and computers"(30), "Medical, precision and optical instruments" (33), "Radio, TV and communication equipment" (32), and "Electrical machinery" (31) are included in this list reflecting the fact that ICT expenditures are recorded as capital formation (and therefore final demand) rather than intermediate inputs to production.

Table 5 - Share of gross capital formation over total commodity output

SECTORS	**Share of gross capital formation over total commodity output**
F - Construction	66.0%
30 - Office machinery and computers	45.6%
29 - Machinery	38.0%

[21] The top 11 ranked sectors were chosen because of the large difference between the share of gross capital formation in total commodity output for these sectors compared with this share for the other NACE industries.

72 - Computer and related activities	29.2%
33 - Medical, precision and optical instruments	28.5%
35 - Other transport equipment	24.6%
32 - Radio, TV and communication equipment	23.8%
34 - Motor vehicles	22.0%
36 - Furniture; other manufactured goods n.e.c	20.2%
31 - Electrical machinery	16.9%
28 - Fabricated metal products, except machinery and equipment	15.3%

Overall from this last analysis it is possible to conclude that in addition to the sectors included in table 4 (identified on the basis of transactions of intermediate inputs) and in order to capture the important interlinkages that are established via investment the following sectors must also be taken into account: "Office machinery and computers" (30), "Electrical machinery" (31), "Radio, television and communication equipments" (32), "Medical, precision and optical instruments" (33), "Other transport equipment" (35) and "Furniture and other manufactured products" (36).

4.2.2. Adoption and diffusion of new technologies

The development, absorption and diffusion of new technologies throughout the economy are important elements of the necessary adjustment of the EU economy. It does not only promote greater economic efficiency but it is also part of a structural change which is necessary to ensure that the EU remains competitive as competition in global markets intensifies.

In this screening exercise the focus is put on the identification of ICT-related sectors, given that ICT has become a "general purpose technology", i.e. a technology that is increasingly used in all activities and all sectors of the economy. Moreover, its impact goes well beyond the ICT-producing sectors and is responsible for important positive spillover effects on market functioning and performance in other sectors, namely by allowing firms to raise their productive efficiency as well as improve their managerial efficiency namely by increasing their ability to respond to changing market conditions. The rapid growth of ICT-producing sectors and the speedy adoption of these technologies by other sectors is said to have importantly contributed to stimulate productivity growth in the US and to increase the productivity gap with the EU. This supports the option for identifying the pivotal sectors for the introduction and the adoption of ICT and for prioritising the investigation of market functioning in these sectors. For the purposes of the screening we identify the ICT-producers and ICT-intensive users sectors following the industry categorisation developed by the Groningen's Growth and Development Centre[22].

[22] In order to keep the same level of aggregation used in the rest of the analysis we take the ICT classification of industries at the 2 digit level, see Inklaar *et al*. (2003), "ICT and Europe's productivity performance industry-level growth account comparison with the United States, *Research Memorandum GD-68*, Groningen Growth and Development Centre.

Table 6 - ICT Categorisation of industries

ICT-PRODUCING SECTORS
30 - Office, accounting and computing machinery
31 - Electrical machinery and apparatus
32 - Radio, TV and communication equipment
33 - Medical, precision and optical instruments
64 - Post and telecommunications
ICT-USER SECTORS
18 - Wearing apparel, dressing and dying of fur
22 - Printing, publishing and reproduction
29 - Machinery
35 - Other transport equipment
36t37 - Manufacturing, nec
51 - Wholesale trade
52 - Retail trade
65 - Financial intermediation
66 - Insurance and pension funding
67 - Activities related to financial intermediation
71 - Renting of machinery and equipment
72 - Computer and related activities
73 - Research and development
74 - Other business activities

4.2.3. Contribution to price adjustment

The mechanism of price formation, if unrestricted, reflects the ongoing changes in demand and supply patterns and is a crucial element of the short-term microeconomic adjustment. The role of price flexibility for adjustment is particularly important for the euro area given that Member States do not have autonomous monetary and exchange policies to respond for example to an adverse asymmetric shock. Adjustment to restore competitiveness in these economies rests on price flexibility. If markets are competitive and prices flexible an industry-wide change in input prices is more completely and rapidly passed through to consumers and downstream markets triggering the adjustment process. In the case of a cost increase, the

lower mark-ups in more competitive markets allow less room for absorbing the cost increase[23]. In the case of a fall in input costs, pass-on occurs in competitive markets because any firm that does not pass on the benefits of lower costs to its customers will loose sales to those that do[24]. In general, price rigidities prolong the short term adjustment to shocks and exacerbate the output and employment losses. Moreover, as price signals are distorted the long-term adjustment in terms of the necessary reallocation of resources, across sectors and activities, will eventually be hampered. Adjustment is thus greatly determined by the extent to which prices fully reflect the changing market conditions and ultimately by the extent to which markets function well. Additionally, price flexibility is also a necessary condition for maximising the gains from trade liberalisation to citizens and consumers. If prices are not flexible the pass through of lower import prices to EU citizens and businesses, via a reduction in consumption prices, is seriously hampered. For consumers it is particularly important that reductions in production costs associated with lower input costs or improved technology are reflected in lower retail prices. However, a lack of suitable data makes it currently impossible to make a systematic, quantitative assessment of the pass-through of cost reductions to consumers. Hence, the consumer dimension is not sufficiently well reflected in the selection of sectors making a significant contribution to the adjustment capacity of the European economy. Efforts are underway, particularly within the context of the preparation of the Consumer Market Scoreboard, to gather the relevant evidence. While in a given sector price stickiness can result from intrinsic characteristics of the sector as well from economy wide institutional rigidities (for example regarding the labour markets), it nonetheless reflects to an important extent existing problems in product market malfunctioning[25].

Table 7 reports recent evidence of the frequency of price changes in different sectors in the euro area from 1994 and 2003[26]. The aim is to identify the sectors where price stickiness is the greatest as these can be seen as bottlenecks in the functioning of price mechanisms and in the transmission of price changes throughout the economy. The available evidence shows that the frequency of price changes varies considerably across sectors. However in general, it is in

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[23] However, at the same time it will be more difficult for the firm to pass on the cost increase to its customers due to the higher demand elasticity associated with the increased competition. On the basis of these arguments one would conclude that stronger competition has an ambiguous effect on upward price stickiness. Therefore, the question needs to be resolved empirically.

[24] In some circumstances, notably in competitive markets when the marginal cost curve is downward sloping, there may be "overshooting", i.e. the absolute price change is greater than the cost change. However, most empirical studies find that pass-on is usually less than complete. For an overview of the theory and empirical literature on pass-on, see Stennek, J. and F. Verboven, "Merger control and enterprise competitiveness", Chapter 4 of F. Ilzkovitz and R. Meiklejohn (eds), "European merger control: do we need an efficiency defence?", Edward Elgar, 2006.

[25] Other determinants of the speed of adjustment include menu costs (i.e. the costs of calculating new prices, informing sales staff and customers and revising contracts) and the existence of medium- and long-term contracts. If a firm's menu costs are high in relation to a change in input costs, the firm may find it unprofitable to react to the input cost change by adjusting its prices. Firms that are in this situation will therefore adapt their prices infrequently. Menu costs are not normally a factor that can be influenced by public policy. Medium- and long-term supply contracts also typically limit the frequency of price changes through clauses which prescribe that prices may change only at specified times or in response to a specific cost trigger. For example, contracts for the supply of organic chemicals often link the price to the cost of one major input (e.g. ethylene) but not to other important inputs, such as energy. Sometimes a price review is only triggered when the input cost increases by a specified minimum percentage.

[26] The data in this table refers to the frequency of changes of consumer prices in the euro area. Further analysis namely using producer prices and survey data can be found in the paper produced by the Inflation Persistence Network, for more information see: http://www.ecb.int/home/html/researcher_ipn.en.html.

services that prices tend to be stickier[27]. Moreover, further evidence points to higher price stickiness than in the US in services, particularly in distribution. These findings have important implications given that these sectors play a pivotal role in the pass through of price changes from upstream sectors to downstream sectors and final consumers. Moreover, the distribution sectors are particularly important to ensure that the gains from having access to cheaper imports resulting from trade liberalisation are shared by citizens and businesses across the EU.

Given the limited availability of data, price rigidity was not used as a selection criterion at this stage of the exercise. However, this does not change importantly the final results as can be seen later in section 5. Four of the eight sectors for which we have indication of price stickiness are included in the final list of selected sectors. The other four sectors are excluded because they do not meet the rest of the proposed criteria.

Table 7 - Evidence of consumer price stickiness

SECTORS WITH SOME EVIDENCE OF PRICE STICKINESS
17 - Textiles
18 - Wearing apparel, dressing and dying of fur
28 - Fabricated metal
50 - Sale, maintenance, and repair of motor vehicles
52 - Retail trade
H - Hotels and restaurants
92 - Recreational, cultural and sporting activities
93 - Other service activities
SECTORS WITH MORE FLEXIBLE PRICES
15 - Food and beverages
23 - Coke, refined petroleum
24 - Printing, publishing and reproduction
30 - Office, accounting and computing machinery
32 - Radio, TV and communication equipment

[27] See F. Altissimo et al. (2006), "Inflation Persistence and Price-Setting Behaviour in the Euro Area: A Summary of the IPN Evidence".

Box 2: Price rigidities and market structure

Price rigidities are indeed largely associated with imperfectly competitive markets. For example, according to Sweezy's kinked demand curve hypothesis, firms in an oligopolistic market enjoy margins that enable them to retaliate if a competitor lowers its price[28]. Consequently, each firm faces a demand curve that is inelastic in a downward direction from the current price. On the other hand, a firm can be deterred from raising its price by the fear that its competitors will not follow suit, since their margins enable them to absorb all or part of a cost increase. The demand for the firm's product therefore reacts elastically if the firm increases its price unilaterally and the consequent loss of sales could make the price rise unprofitable. The underlying assumption of the kinked demand curve hypothesis is that firms are less concerned with short-run profit maximisation than with defending their market shares. Such a strategy can be rational in the longer term if firms incur significant costs in regaining lost customers[29]. Collusion or coordinated behaviour can also contribute to dampen the responsiveness of prices to cost shocks. In particular, it has been observed that prices in a market tend to show much more variance over time after a cartel has been broken up than while the cartel is in operation[30]. One possible explanation of this is that coordinating a price change may be costly. It has also been suggested that cartels avoid sudden price changes because these can alert buyers to the possibility of the existence of a cartel[31]. Furthermore, when cost shocks affect the members of a cartel asymmetrically, the difficulty for cartel members of monitoring each others' costs may lead them to prefer a rigid pricing scheme, where a firm's collusive price is independent of its current cost position[32].

4.3. Signs of market malfunctioning[33]

While the functioning of markets can be assessed in different ways depending on the policy objective envisaged, the approach adopted in this screening exercise is a pragmatic one that rests on the efficiency in the use of resources and on the level of business and consumer satisfaction.

4.3.1. Market inefficiencies

This analysis draws on the idea that efficient markets are competitive markets where resources are well allocated within and between firms and where companies have the necessary incentives to innovate. In order to screen the various sectors of the economy we adopt an economic definition of market efficiency based on sectoral productivity performance. Productivity gains are associated with allocative efficiency gains (associated with increasing market shares of higher productivity firms in a given sector at the expense of less productive ones), productive efficiency gains (associated with the reduction of slack by managers and workers and to the improvement in the organisation of firms) and dynamic efficiency gains (resulting from the adoption and development of product and process innovations).

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28 May be more relevant to firm-specific than to industry-wide cost changes.

29 Although Sweezy's model suggests that prices should be equally sticky in both directions, empirical studies suggest that the pass-through of cost reductions is usually slower and less complete than that of cost increases.

30 Abrantes-Metz, R., L. Froeb, J. Geweke and C. Taylor (2005), "A Variance Screen for Collusion", FTC Working Paper no. 275, Washington.

31 Harrington, J. E. and J. Chen (2004), "Cartel Pricing Dynamics with Cost Variability and Endogenous Buyer Detection", Working Paper no.514, Johns Hopkins University Department of Economics, Baltimore MD.

32 Athey, S., K. Bagwell and C. Sanchirico (2004), "Collusion and Price Rigidity", Review of Economic Studies 71 (2), April.

33 For the purposes of this document, market malfunctioning should be understood in the broad sense, i.e. as evidenced by a group of specific indicators set out in the document. It does not necessarily correspond to the more narrow economic notion of "market failure" describing the condition where the allocation of goods and services by a market is not efficient (Pareto-efficiency).

Given the similarities in terms of factor endowments and technological development, the US productivity performance in a given sector is used as the benchmark against which we evaluate the productivity performance of the EU in that same sector[34]. Therefore for each sector we compare the labour productivity (gross value added per hour worked) growth in the EU with their US counterpart[35]. The sectors where productivity growth is trailing that of the US between 1995 and 2004 are identified as sectors where there are indications of problems in market functioning. Table 8 shows the sectors that have been identified as showing signs of market inefficiency from a productivity growth perspective[36].

Table 8 - Labour productivity growth between 2004 and 1995 (in %)[37]

	EU25	**US**
MANUFACTURING		
17 - Textiles	22.9	94.9
18 - Wearing apparel, dressing and dying of fur	13.9	82.2
19 - Leather and footwear	6.1	81.3
21 - Pulp, paper and paper products	32.4	75.8
22 - Printing, publishing and reproduction	14.3	29.7
25 - Rubber and plastics	32.3	58.4
26 - Other non-metallic mineral	33.5	38.8
27 - Basic metals	28.9	55.6
28 - Fabricated metal	19.3	41.3
29 - Machinery[38]	25.1	48.9

[34] However, this does not exclude the possibility of using other benchmarks particularly when the analysis is done at the level of each Member State. In that case, the distance of each Member State to the EU best performer(s) will also be taken into account to assess productivity performance.

[35] *A priori*, total factor productivity (TFP) should be used as a measure of productivity. Because it is not influenced by the level of capital per worker it captures better the concept of economic efficiency. However, due to unavailability of comparable TFP data for EU and US at sectoral level, the analysis is made here on the basis of labour productivity.

[36] To check the robustness of the analysis the exercise was repeated using the trend in labour productivity growth obtained from the Hodrick-Prescot filtered series to take into account the differences in the stage of the business cycles in the EU and the US during this period. Given the need for using a long time series to apply this procedure, this analysis could only be done for the euro area and not for the EU15. The sectors that have been identified as underperforming in terms of productivity growth relative to the US remain the same.

[37] The analysis of productivity growth relies on the series of labour productivity for the US that is based on the SIC system of national accounts for the US. To further check the robustness of the analysis the comparison between the EU and the US productivity growth is also done using an alternative productivity series for the US which is based on the new NAICS system of industry classification. The results obtained are broadly similar to the ones presented in table 8.

[38] Considering an alternative comparison measure, the share in world market exports, Europe is with 41% the world's largest producer and exporter of machinery, significantly outperforming both the USA and

30 - Office, accounting and computing machinery [39]	64.2	268.9
31 - Electrical machinery and apparatus	24.7	219.7
32 - Radio, TV and communication equipment	154.2	312.8
34 - Motor vehicles, trailers and semi- trailers	26.7	88.4
35 - Other transport equipment	35.8	36.9
36t37 - Manufacturing, nec; recycling	10.1	51.4
SERVICES		
50 - Sale, maintenance and repair of motor vehicles	7.2	75.5
51 - Wholesale trade	27.2	52.8
52 - Retail trade	14.6	58.1
H - Hotels and restaurants	-1.3	11.8
62 - Air transport	6.6	57.9
63 - Supporting and auxiliary transport activities	-2	42.2
65 - Financial intermediation	46.7	69.4
66 - Insurance and pension funding	-13.4	10.3
73 - Research and development	-1.6	46.4
74 - Other business activities	-7.7	17.1
90 - Sewage and refuse disposal	-5.1	37.6
92 - Recreational cultural and sporting activities	4.3	21.7
93 - Other service activities	-11.1	11.8
CONTRIBUTION TO TOTAL VALUE ADDED 2004		45%
CONTRIBUTION TO TOTAL EMPLOYMENT 2004		48.3%

The productivity gap *vis-à-vis* the US is particularly important in the services sectors. Moreover, it is striking that many services sectors show a decline in productivity over this period. However, while this evidence can be interpreted as a sign of market malfunctioning,

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[39] Japan. This would seem to indicate a strong competitive position of the machinery sector, in spite of a rate of productivity growth, which has been below that of the US in recent years.
For sector 30 "Office accounting and computing machinery" the figures presented refer to "Electrical and optical equipment", which is the aggregation of sectors 30 to 33. While the available evidence suggest that sector 30 is underperforming the US in terms of productivity growth during the analysed period, international comparison based on exact productivity figures are fraught with difficulties namely due to the uncertainty over the price indices to be used to deflate the data. This point merits further investigation in the future.

the difficulties in measuring productivity in many services sectors require caution in drawing definite conclusions. With respect to manufacturing, the largest gaps in productivity growth *vis-à-vis* the US can be found in the technology-intensive sectors like "Electrical and optical equipment" (30). However, productivity growth also lags behind the US in more traditional sectors such as textiles (17), clothing (18) and footwear (19) as well as in medium-technology sectors like in motor vehicles (34) where the EU traditionally holds comparative advantage[40].

4.3.2. Consumer dissatisfaction

The degree of consumer and business satisfaction provides complementary information about market functioning. In a broad sense, well functioning markets not only must guarantee an efficient use of resources but they must also respond well to the needs of users (consumers and businesses), by allowing an informed identification and selection of the suppliers that offer the best goods and services at an affordable price. Therefore high levels of consumer and business dissatisfaction should also be taken as signs of market malfunctioning. However, there are two important caveats to take into account when using indicators of user satisfaction. The first is related to the fact that such indicators are subjective by nature and therefore not suitable to extrapolate general conclusions. The second caveat relates to the limited sectoral coverage of these indicators, which is limited to network industries.

The 2006 Consumer Satisfaction Survey provides statistically representative information on the degree of EU consumers' satisfaction in eleven sectors of services of general economic interest, namely: gas, water, electricity, postal services, mobile telephone, fixed telephone, urban transport, extra urban transport, air transport, retail banking and insurance[41]. Each sector is evaluated on the basis of: 1) the overall satisfaction of the consumer, namely regarding the characteristics of the service provided (price, quality, image, …) and the commitment of the provider, and 2) the occurrence of negative experiences and complaints[42]. Each individual consumer was asked to rate the satisfaction level with the supplier of each analysed sector on a 1 to 10 scale; "1" represents the lowest level of satisfaction and "10" the highest. The individual scores were used to compute the average level of satisfaction per sector. Table 9 reports the EU scores for the different sectors analysed.

The average satisfaction scores range from 7.04 to 7.96. The sectors with the lowest satisfaction score were: extra urban and urban transport, postal services and fixed telephony. In contrast, EU consumers were most satisfied with air transport, mobile telephony, insurances and retail banking.

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40 See "Rising International Economic Integration: Opportunities and Challenges", The EU Economy 2005 Review, Part I, Chapter 2.

41 The analysis was carried out on country level for 25 Member States and is based on direct consumer feedback regarding their satisfaction levels in each sector.

42 In addition, the study provides another type of indicators, *"*A*dded value indicators"*, which capture the consumer satisfaction taking into account consumer expectations regarding price, quality and image. These indicators provide relevant information for the second step of the screening, where the causes for malfunctioning are scrutinised.

Table 9 - Average satisfaction scores by service

SERVICE OF GENERAL INTEREST	AVERAGE SCORES
Air transport	7.69
Mobile telephony	7.91
Insurance services	7.92
Retail banking	7.82
Water distribution	7.73
Gas supply	7.64
Electricity supply	7.61
Postal services	**7.42**
Fixed telephony	**7.3**
Extra urban transport	**7.05**
Urban transport	**7.04**

A complementary source of information regarding consumer and business satisfaction in specific sectors is provided by the Public Consultation on the future of Single Market policy carried out by DG MARKT in the second half of 2006[43]. While this survey is not statistically representative, the collected information reveals that stakeholders feel that there is room for improvement in terms of market functioning in retail financial services, insurance, transport and energy.

Overall, on the basis of the available evidence we can identify the sectors of "Post and telecommunications", "Transport", "Financial services" and "Energy" as sectors where markets do not seem to be delivering sufficiently in terms of adequately responding to users' needs.

While it is not straightforward to match the sectors that are analysed in the consumer satisfaction surveys with the NACE sectoral classification that was used in the analysis of productivity performance, it is nonetheless possible to draw some general conclusions. In the transport sector it seems that from the point of view of users it is the "inland transport" (60) that seems to delivering a less satisfactory outcome[44]. In contrast, the "air transport" (sector 62) although clearly lagging in terms of productivity performance vis-à-vis the US seems to respond fairly well to the users' needs. The telecommunications and postal sectors (sector 64) do not have problems in terms of economic efficiency but do not seem to respond well to the needs of consumers. This is the case particularly for the postal and the fixed telephony segments. Finally, in the case of financial services the picture that emerges is even less clear cut. While they show problems in terms of productivity performance, the perception of consumers and businesses regarding the satisfaction with the services they provide is mixed. These sectors are pointed out as problematic in the DG MARKT consultation while they are

[43] The DG MARKT consultation received in total 242 responses to the questionnaire.

[44] Particularly urban and extra-urban transport.

among the best rated in the 2006 Consumer Satisfaction Survey.[45]. This clearly reveals the limitations of indicators based on the subjective opinion of the respondents.

Despite the caveats associated with the use of consumer and business satisfaction data this aspect is taken into account when identifying the sectors with market malfunctioning given the importance attached to ensuring the maximum welfare for citizens in the new strategy for the Single Market. Hence, for the purpose of the current screening, we consider that a sector shows signs of market malfunctioning when it is underperforming in terms of productivity growth *vis-à-vis* the US counterpart or when the consumers do not seem to be satisfied. In practice this means that we would have to add to the list of sectors presented in table 8 (sectors underperforming from an economic efficiency view point the sectors "Electricity , gas and water supply" (E), "Inland transport" (60) and "Post and telecommunications" (64), which are underperforming from the point of view of consumers. The aspect of consumer satisfaction will be further developed within the forthcoming Consumer Market Scoreboard[46]. Furthermore, this Scoreboard should in time provide information on this aspect and other useful tools to identify market malfunctioning from the point of view of the economic and social outcomes for consumers. Such input from the Scoreboard could thus be progressively incorporated in the methodology.

5. THE IDENTIFIED SECTORS

In table 10 we present the list of sectors that are selected on the basis of the criteria adopted in the proposed screening methodology. The selection strategy adopted rests on the identification of all the sectors that show problems in terms of market functioning from an economic and consumer point of view (see section 4.3). Out of these we then take all the sectors that are either important for the current and future growth and job creation (as defined in section 4.1) or that are important for improving the adjustment capacity of the EU economy (see section 4.2). The 23 sectors are almost evenly distributed between manufacturing and services. Regarding manufacturing we find mostly sectors producing intermediary and investment (equipment) goods. The selected services sectors belong mainly to distribution (retail, wholesale, hotels and restaurants) activities, financial services as well as network industries like "Electricity, gas and water supply", "Inland transportation" and "Post and telecommunications". In addition there is also a heterogeneous services sector (other business services). This sector includes many professional services like engineering consultancy, legal and architectural services, etc.

It is also important to highlight the fact that while price stickiness was not used as criterion due to lack of comparable data across all sectors, this final selection of sectors include retail trade, a sector for which there is evidence of higher price stickiness in the euro area than in the US and which is particularly important for the transmission of price changes reflecting

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45 More qualitative information regarding retail services (cross-border shopping and e-commerce) can be found in the special Eurobarometer on Consumer protection in the Internal Market and the ECC Network Report - European Online Marketplace - Consumer Complaints 2005.

46 The Consumer Market Scoreboard aimed at putting in place regular monitoring of consumer markets is being developed by the Commission. The Scoreboard will develop five top-level indicators namely complaints, prices, satisfaction, switching and safety. The Scoreboard will look in particular into the retail markets across the EU and at the level of Member States, by tracking progress in terms of market integration and consumer confidence.

changing demand and supply both in the EU and abroad[47]. Furthermore, out of the 8 sectors for which the available data pointed to a high degree of price stickiness, four have been included in the list of identified sectors, namely "Fabricated metal", "Sale, maintenance and repair of motor vehicles", "Retail trade" and "Hotels and restaurants".

[47] See F. Altissimo et al. (2006), "Inflation Persistence and Price-Setting Behaviour in the Euro Area: A Summary of the IPN Evidence".

Table 10 - Selection of sectors with malfunctioning markets, which are important economically or contribute significantly to adjustment capacity

SECTORS	Contribution to total employment	Contribution to total value added	Productivity growth 1995-2004	Interlinkages (*)	ICT (**)	Economically important	Important for adjustment
22 - Printing, publishing and reproduction	1.0	1.0	14.3	F	U		X
25 - Rubber and plastics	0.8	1.0	32.3	F		X	
27 - Basic metals	0.5	0.7	28.9	F		X	
28 - Fabricated metal	1.9	1.8	19.3	F/I		X	
29 - Machinery	**1.7**	**2.1**	**25.1**	**B/I**	**U**	**X**	**X**
30 - Office, accounting and computing machinery (***)	0.1	0.1	64.2	I	P		X
31 - Electrical machinery and apparatus	**0.8**	**0.9**	**24.7**	**I**	**P**	**X**	**X**
32 - Radio, TV and communication equipment	**0.4**	**0.5**	**154.2**	**I**	**P**	**X**	**X**
34 - Motor vehicles, trailers and semi- trailers	1.1	1.4	26.7	B/I		X	
35 - Other transport equipment	0.4	0.4	35.8	I	U		X
36 - Furniture, other manufactured goods n.e.c.	1.1	0.8	10.1	I	U		X
37 - Recycling				F	U		X
E - Electricity, gas and water supply	0.7	2.2	52.9	F		X	
50 - Sale, maint. and repair of motor vehicles	2.2	1.7	7.2	B		X	
51 - Wholesale trade	**4.4**	**3.6**	**27.2**	**F/B**	**U**	**X**	**X**

52 - Retail trade	**8.5**	**4.3**	**14.6**	**F/B**	**U**	**X**	**X**
H - Hotels and restaurants	4.5	2.2	-1.3	B		X	
60 - Inland transport -	2.7	2.6	27.6	F		X	
63 - Supporting and auxiliary transport activities	1.3	1.8	-2.0	F		X	
64 - Post and telecommunications	**1.4**	**2.4**	**121.1**	**F**	**P**	**X**	**X**
65 - Financial intermediation	**1.7**	**4.1**	**46.7**	**F**	**U**	**X**	**X**
66 - Insurance and pension funding	**0.5**	**1.0**	**-13.4**	**B**	**U**	**X**	**X**
74 - Other business activities	**8.8**	**7.0**	**-7.7**	**F**	**U**	**X**	**X**
Total contribution	46.5	43.6					

(*)"B" stands for backward interlinkages, "F" for forward interlinkages and "I" for investment.

(**) "P" stands for ICT - producing sector and "U" for ICT - using sectors.

(***) See Footnote 38.

A subgroup of selected sectors may be identified to reflect more closely and emphasise the role of adjustment (as defined in section 4.2) in the screening methodology. For this a stricter selection strategy was adopted that imposes that all the selected sectors meet the three criteria simultaneously. In other words these sectors are economically important, they show signs of market malfunctioning and contribute importantly to improve the adjustment capacity of the EU. The latter criterion imposes that all these sectors should have not only important interlinkages with the rest of the economy but also that these interlinkages should be a vehicle for the diffusion of ICT across the EU economy. Together these 9 sectors account for 28% of total EU25 employment and 26% of EU25 value added. The majority of these industries are services sectors that use ICT intensively. They include distribution activities, financial services, post and telecommunications and professional services. Regarding manufacturing industries, there are two ICT producing sectors (electrical machinery and radio, TV and communication) and one ICT intensive user (machinery)[48]. As the consumer dimension is not sufficiently well reflected in the process of selecting sectors that make an important contribution to adjustment, sectors that suffer from problems of adjustment on the demand side are not well represented.

[48] The other network industries that were included in the list of selected sectors (namely "Inland transport" and Electricity, gas and water supply") have been dropped from this sub-group of sectors because while they are suppliers of essential inputs to the rest of the economy they are not ICT-producers nor they are categorised as intensive users of ICT.

6. FOLLOW-UP

After having identified the key sectors for growth and adjustment presenting signs of market malfunctioning two main avenues for further work are proposed. The first is a complementary preliminary analysis of the possible causes for market malfunctioning in the selected sectors. This requires a second screening exercise at the policy level, which will focus on sectors where monitoring needs are the most acute and would put less emphasis on sectors which have recently been subject to in depth market monitoring and policy decisions.

This analysis of the causes of market malfunctioning could also be regarded as a robustness check of the screening phase as it will allow checking whether all of the sectors that have selected in the screening are indeed facing challenges from a policymaking point of view. Furthermore, this would involve also a complementary screening at the policy level matching the causes of market malfunctioning with one or more policy areas and possibly specific policies. This would give a first indication of the scope for policy intervention and contribute with additional insights into which policy instruments better address the particular needs of a given sector(s). However, given the complexity of the analysis of the causes behind market functioning and the fact that at this stage the focus is still on sector level data and publicly available indicators, the results of such an analysis are necessarily preliminary and should be complemented by additional data including of qualitative nature. Nonetheless, this "light" policy screening of the factors explaining market malfunctioning will the starting point for the subsequent in depth investigation that is envisaged for the second stage of the methodology that has been proposed.

This analysis covers five main dimensions: integration/openness, competition, innovation, regulation and consumers. While these dimensions are intrinsically intertwined, in this analysis for the sake of simplicity each one will be dealt with separately. A brief description of some indicators that can be used is given in box 3 below.

Box 3: Possible indicators to be used in different areas of market investigation

i. Integration

The analysis of the degree of integration can be based on a limited number of sector-level indicators, namely: market thickness[49], the level of import penetration (taking into account both intra and extra EU partners), and the coefficient of variation of prices across countries (to examine the degree of price dispersion). The latter indicator is especially important for the services sectors for which no trade data are available.

ii. Competition

Measuring competition on the basis of such fairly aggregated sector-level data is particularly difficult, since a single sector may include several subsectors and markets with different characteristics. Nonetheless, such an analysis can yield useful first indications of whether competition should be an issue for further investigation[50]. A possible approach to adopt is, rather than aiming at measuring competition directly, to focus on its effects and/or the extent to which the conditions conducive to competitive rivalry are present in the sector. Four main types of indicators can be used: mark-ups, concentration levels (based on the Herfindahl-Hirschman index), indicators

[49] Market thickness is captured by the share of actual trade flows over total possible bilateral trade flows within the EU in a given industry.

[50] The suggested framework of analysis and indicators are similar to those adopted in the recent study done by London Economics (in association with ZEW and RPA) for the Commission "Identification of industrial sectors with weak competition: Analysis of causes and impacts".

based on the market shares of the 8 largest firms, and the number of antitrust cases (Articles 81 and 82) on which the Commission took a decision involving a finding of anti-competitive behaviour[51].

iii. Skills and Innovation

The measurement of innovation performance is a genuinely difficult exercise due to severe data constraints and the difficulties in unambiguously defining the different types of innovative activities in the various sectors (notably in services). Looking at input and output indicators can nonetheless shed some light on the innovation performance of the sectors under consideration[52]. The former include R&D expenditure as a share of value added and employment structure by skill intensity (only measure available for services sectors). The latter is the number of patent applications at the European Patent Office (EPO).

iv. Regulation

The identification of the sectors where regulation negatively affects market functioning is also notoriously difficult given the complexity and diversity of regulation design and of the mechanism by which it impacts on the activities of the different sectors/markets. Given the inevitable time and resource constraints for an in-depth analysis, the focus at this stage can be put on assessing the level of regulation rather than more qualitative considerations. Two indicators can be used: the OECD product market regulation indicator that is available for some non-manufacturing network industries as well as for the retail trade and the professional services sectors, and the OECD regulation impact indicator that measures the 'knock-on' effects of regulation in non-manufacturing sectors on all the other sectors of the economy.

v. Consumers

Assessing the environment in which consumers operate is an essential part of any market investigation. To make this operational the Consumer Scoreboard will develop indicators related to complaints, consumer satisfaction, switching and safety. Data for many of these indicators are currently patchy and close cooperation with national authorities, statistical offices and stakeholders will be needed to develop these tools

The objective is, on the basis these indicators, to make a summary assessment of the situation in each of the scrutinised sectors. However, due to the natural interactions between the five different dimensions considered and the fact that sometimes the picture emerging from the various indicators can be ambiguous, complementary information of a more qualitative nature should also be used to substantiate the conclusions of the analysis.

At this stage due to the lack of available data the consumer dimension is not yet taken into account in this first analysis of the causes of market malfunctioning . Nonetheless, on the basis of ongoing research it is possible to draw some tentative general conclusions. First, in most of the sectors selected in the screening there are some indications of problems in the field of innovation. However, this conclusion should be taken with caution particularly for services given the scarcity of data and indicators[53]. For the moment, for services the available data are limited to the high skilled labour intensity of production, which is an indirect and

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51 The indicators are proposed to capture the jostling of market shares among top firms are the "in-out" index (the number of exits and new entries in the top 8 group of firms in a given period) and the "total number of different firms" index (total number of firms that were included in the top 8 group of firms in a given period).

52 The values of these indicators in the EU and in the US for each sector are compared at the most disaggregated level available.

53 In services innovation occurs essentially in processes and this is notoriously difficult to identify and document.

necessarily partial assessment of inputs for innovation[54]. Clearly, for future research further work on the collection of innovation data for the sectors is necessary.

Second, regulation seems to be another cross cutting issue affecting market functioning in many of the sectors identified. However, the analysis is limited by the lack of indicators for sector-specific regulation in manufacturing. While for non-manufacturing sectors OECD regulation indices are available, for manufacturing the only data available (OECD REGREF indicator) do not provide a measure of regulation in a given sector but rather a measure of the impact of the regulation in non-manufacturing sectors on downstream sectors[55]. A more thorough investigation can only be made by gathering data on sector-specific regulation directly imposed on the different manufacturing sectors.

Third, services including network industries are the sectors most affected by lack of integration and insufficient competition. The European Commission's sector inquiries on retail banking[56] and business insurance[57] already pointed to a number of competition concerns regarding financial services. Often the competition and integration problems are intertwined and in some sectors also reflect the regulatory framework that creates barriers to trade and to the setting up of activities by foreign affiliates. For example, in business services (sector 74) problems are particularly related to the conditions for entry into the professions and excessively restrictive codes of practice imposed on members of the professions (e.g. restrictions on advertising)[58]. Such problems often fall outside the scope of competition policy in a strict sense being more closely related to the regulatory framework, which often impact on the level of integration[59]. In general, such evidence points to the need for an integrated and comprehensive policymaking approach that tackles simultaneously integration, competition and regulation issues.

Fourth, although in general integration in manufacturing is much more advanced than in services, in some manufacturing sectors integration is relatively low, namely in "Printing, publishing and reproduction" (22), "Basic Metals" (27), and "Other transport equipment" (35). In the latter (which is high technology content and ICT intensive) home bias in public procurement could play a role in deterring further cross border market integration. In contrast, in sectors 22 and 27 barriers to market integration are different in nature. Sector 22 remains essentially national in nature with very low import penetration and low intra-EU trade, arguably reflecting to great extent intrinsic barriers associated with linguistic and cultural

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54 For sector 22 no data are available on innovation inputs and for sector 74 no data are available for both innovation inputs and outputs.

55 The coverage is limited to network industries, distribution and some professional services.

56 In particular, evidence of large variations in merchant and interchange fees for payment cards, barriers to entry in the markets for payment systems and credit registers, obstacles to customer mobility and product tying was found, see Communication from the Commission, Sector Inquiry under Art 17 of Regulation 1/2003 on retail banking - COM(2007) 33.

57 The European Commission's sector inquiry into the provision of insurance products and services to businesses (Communication from the Commission, Sector Inquiry under Article 17 of Regulation 1/2003 on business insurance - COM(2007) final forthcoming) recommends a range of measures to strengthen competition in business insurance such the limitation of both excessively long term contracts and subscription practices involving in particular the alignment of premiums in the coinsurance and reinsurance markets.

58 See European Commission (2005), "Professional services - scope for more reform" - COM(2005) 405, 5.9.2005.

59 Measures to promote the mutual recognition of professional qualifications can make an important contribution in this respect see for example "Product market competition in OECD countries: a synthesis", OECD working party N°1 on Macroeconomic and Structural Policy Analysis, October 2005.

affiliation. Integration in sector 27 is also limited by the intrinsic physical characteristics of production (heavy goods) which entail substantial transport costs.

Given that one of the main objectives of market monitoring is to identify markets where policy interventions can be effective in resolving problems with market functioning, it is important to further explore the geographic dimension of these problems. This calls for similar market monitoring exercises at the level of each Member State, which would entail close collaboration between the Commission and national administrations. This would an important step as it would allow to check the validity of the screening phase at the level of the Member States, as the sector characteristics can differ from one country to another and some problems affecting market functioning may not have a Community dimension but rather a national one.

The second avenue for further work concerns the concrete implementation of the new approach to product market and sector monitoring. The results of the sector screening may serve as a basis for in-depth market monitoring exercises focused on the multidimensional aspects of the functioning of markets. The results of the sector screening will have to be considered in combination with other relevant and more qualitative information before the decision is taken to launch an in-depth monitoring exercise. This in-depth market monitoring could then be used as a tool to help define the priority measures for a better functioning Single Market. Such measures could be either market- or sector-specific or more horizontal in nature depending on the prevalence of the problems identified.

In some selected sectors, such as energy and financial services, the Commission has already conducted in-depth monitoring exercises, while in others, such as post and telecommunications the Commission has recently proposed regulatory reforms that address problems identified. The conclusions of the top-down sector screening presented here therefore are broadly in line with the current focus of EU policies. In these situations where problems have already been identified and addressed there is no immediate need to carry out an in-depth market monitoring under the methodology presented in this paper.

. Similarly, one cannot exclude that analyses of sectors that were not selected during the screening process would take place to address specific needs. As a consequence, the list of sectors selected for deeper analysis should be considered as indicative. Not all the sectors identified will be the object of an in-depth analysis, whilst inclusion of other sectors in the list could be envisaged in case of converging requests from services, Member States and/ore stakeholders. In addition, sector screening should not call into question horizontal policy actions aimed at improving the functioning of the Single Market within such sectors or more generally (for example, in terms of ensuring the freedom of movement of people or in eliminating tax-related barriers to the Single Market).

For the Commission services the adoption of this new approach could contribute to a streamlining of the various market monitoring exercises carried out in different services, while ensuring the consistency of the different horizontal policies. For the Member States, similar exercises of in-depth market monitoring could be envisaged based on the sector screening at the national level and would offer guidance to their reform agenda. The successful implementation of this new approach towards achieving more consistent and better targeted Single Market policies would require a high degree of ambition and political engagement as well as a heavy commitment in terms of resources. In light of this, an evaluation of the approach following the completion of the in-depth analysis of market functioning in two or three sectors should be envisaged.

- ANNEX 1 -

TABLE A: Analysed sectors

SECTORS
15 - Food and beverages
16 - Tobacco
17 - Textiles
18 - Wearing apparel, dressing and dying of fur
19 - Leather and footwear
20 - Wood and cork
21 - Pulp and paper
22 - Printing, publishing and reproduction
23 - Coke, refined petroleum and nuclear fuel
24 - Chemicals and chemical products
25 - Rubber and plastics
26 - Other non-metallic mineral
27 - Basic metals
28 - Fabricated metal
29 - Machinery
30 - Office, accounting and computing machinery
31 - Electrical machinery and apparatus, nec
32 - Radio, television and communication equipment
33 - Medical, precision and optical instruments
34 - Motor vehicles
35 - Other transport equipment
36 - Manufacturing nec
37 - Recycling
E - Electricity, gas and water supply

F- Construction
50 - Sales, maintenance and repair motor vehicles
51 - Wholesale trade
52 - Retail trade
H - Hotels and restaurants
60 - Inland transport
61 - Water transport
62 - Air transport
63 - Supporting and auxiliary transport activities
64 - Post and telecommunications
65 - Financial intermediation
66 - Insurance and pension funding
67 - Activities related to financial intermediation
71 - Renting of machinery and equipment
72 - Computer and related activities
73 - Research and development
74 - Other business activities
90 - Sewage and refuse disposal, sanitation and similar activities
91 - Activities of membership organizations nec
92 - Recreational, cultural and sporting activities
93 - Other service activities