



## Digital Tools in Cross-Cultural Analysis of Sme Financial State Support in the Conditions of Pandemic Crisis

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## Abstract

The main goal of the given research is to conduct cross-cultural analysis of financial support mechanisms in Europe in order to develop practical recommendations, focused on SME recovery, for emerging markets, in particular Ukraine. The article examines the main effects of pandemic on economy, focusing on business disruption, in particular SME. The financial flows as a response on anti-pandemic prevention measures were analyzed all over the world through digital tools, namely BI, as well as differentiation of support measures. The general fall in the main macroeconomic indicators was indicated for European countries and the deep analysis of financial support mechanisms provided by states was conducted. Taking into account research results, it was revealed that complex policy mechanisms were developed mainly by advanced economies while emerging markets, in particular Ukraine, do not have the effective mechanisms aimed at eliminating negative effects of pandemic. So, on the basis of conducted analysis the practical recommendations for emerging markets, in particular Ukraine, were developed using relevant European experience.

**Keywords:** Financial support, Digital tools, Business intelligence (BI), State support mechanisms, SME, Pandemic crisis, SME recovery.

## Introduction

Pandemic crisis, caused by Covid-19 spread, leads to economic and social policy redefinition on global scale because of negative effects due to pandemic on different sectors not only in social security and healthcare ones, but in public, monetary and financial ones. Policy-making has struggled with unknown phenomenon which required a lot of an unprecedented policy initiatives such as complete outbreak of business in almost all spheres, exemplified as trade, entertainment, tourism, services, the stock and financial markets, etc. The negative consequences as sharp drop in macroeconomic stability was fixed on the basis of reduction of such indicators, namely the level of unemployment, GDP, consumer price index and budget deficit.

Usual policy-making processes requested immediate response due to almost complete lock-down of majority of economic processes, caused by non-economic (pandemic) crisis. The required policy response due to ongoing pandemic consequences should be complex and effective tool in order to provide economic recovery in different spheres and support business.

## Literature Review

Recently, pandemic crisis and its impact on different spheres, business in particular, have become a focus of research interests for many scientists and scholars. Research paper of Grondys K. indicates that survival rate of SMEs was extremely reduced due to pandemic, and in pre-pandemic period this sector was one of the most vulnerable according to criteria of economic stability (Grondys et al, 2021). Complete revenues' fall in SME sector regarding pandemic outbreak requires immediate development of the anti-crisis package of government support aimed at eliminating destructive factors and SME support achieving in such way economic growth recovery (Razumovskaia, 2020).

Gungoraydinoglu A. and others (2021) substantiate that economic recession is the expected pandemic consequence as the response to business lock-down, so only complex policy could be the solution in order to prevent severity of the mentioned recession. The study of Grima et al (2021) revealed the pandemic impact on such sphere as stock market in which the major stock exchanges and its volatilities were negatively affected by pandemic.

The external factors in financial sphere were crucial for financial crisis due to pandemic, which triggered the collapse of banking system and economy, so the authors analyzed anti-crisis measures of 2008 in order to imply some relevant ones (Dedu et al, 2021). Kornet and others (2021) deeply analyzed the direct pandemic impact on macroeconomic stability, identified the main negative effects and possible solutions for its mitigation, which could become the basis for policymakers (Zimon et al., 2021). The optimal mix of policies must be the preventive measure in order to eliminate negative effects of pandemic on economy and business sector in particular (Niavis et al, 2021).

The low level of SME development is typical for emerging economies, so the relevant ways for their support by governments should be the core of strategic policy in order to mitigate possible macroeconomic disruptions (Polishchuk et al, 2019). The negative effects on business in Ukraine and its possible financial support were analyzed by Perevozova and others (2019). The other important side of the effectiveness of financial support mechanisms is its relevant public administration (Klochan, 2021). The effectiveness of financial support mechanisms also depends on pre-defined KPIs and outputs of public management, so their importance should not be underestimated (Bondarenko, 2021).

All the mentioned problems emphasize the real need to develop specific policy in response to pandemic crisis in order to prevent SME shortage which are influential for macroeconomic stability at all. Though, the main goal of the given research is to conduct cross-cultural analysis of financial support mechanisms in Europe in order to develop practical recommendations, focused on SME recovery, for emerging markets, in particular Ukraine.

## Results and Discussion

### Analysis of spending flows due to pandemic crisis over the world

Due to the pandemic a lot of spheres are suffered from almost complete blocking of business activities, that leads to general economic disruption at all. The ongoing pandemic over the world due to Covid-19 spread led to pandemic crisis, so public authorities developed specific policies in order to response on challenges regarding economic collapse not only in health sector, but in business sector either.

Enormous spending was distributed to different economic spheres, business in particular, where SMEs play a pivotal role and could be considered as the most vulnerable sector of economy. It is essential to analyze the global public outflows according to the level of country development as well as its regional division (see fig. 1).

Taking into account tendencies on fig. 1, it should be emphasized that the main financial support regarding global outflows to business recovery were distributed by advanced economies and emerging markets, which are mainly represented in Western and Central Europe as well as Northern America. Such fact became the basis for conducting this research regarding focusing on features of European support policies. But along with the level of governmental spending on business support the differentiation of support measures has great importance regarding to reveal the main characteristic features of developed policies in Europe, which are presented in Table 1.

**Table 1.** Financial policy support measures in some European countries, % of GDP

Source: formed by the authors on the basis of IMF data, 2020

Country	Equity injections, loans, asset purchase or debt assumptions.	Guarantees	Quasi-fiscal operations
Austria		4.75	
Belgium	0.50	23.62	
Bulgaria	2.79		5.18
Czech republic	0.04	30.87	
Denmark	5.29	12.78	
Estonia	6.45	2.25	
Finland	2.07	11.01	0.85
France	1.88	29.62	
Germany	12.10	49.59	
Greece		3.06	
Hungary		8.84	
Italy	0.40	65.56	
Latvia	1.40	4.95	0.00
Lithuania	1.33	5.81	
Moldova	0.68	0.10	
Norway	3.35	8.70	
Poland	3.52	6.50	
Portugal		13.41	
Romania	0.32	6.09	
Slovak Republic	0.00	9.00	
Slovenia	2.65	10.15	0.44
Spain	0.11	26.39	1.83
Sweden	0.48	10.28	
Switzerland	0.29	12.49	
Ukraine			
United Kingdom	0.10	33.03	

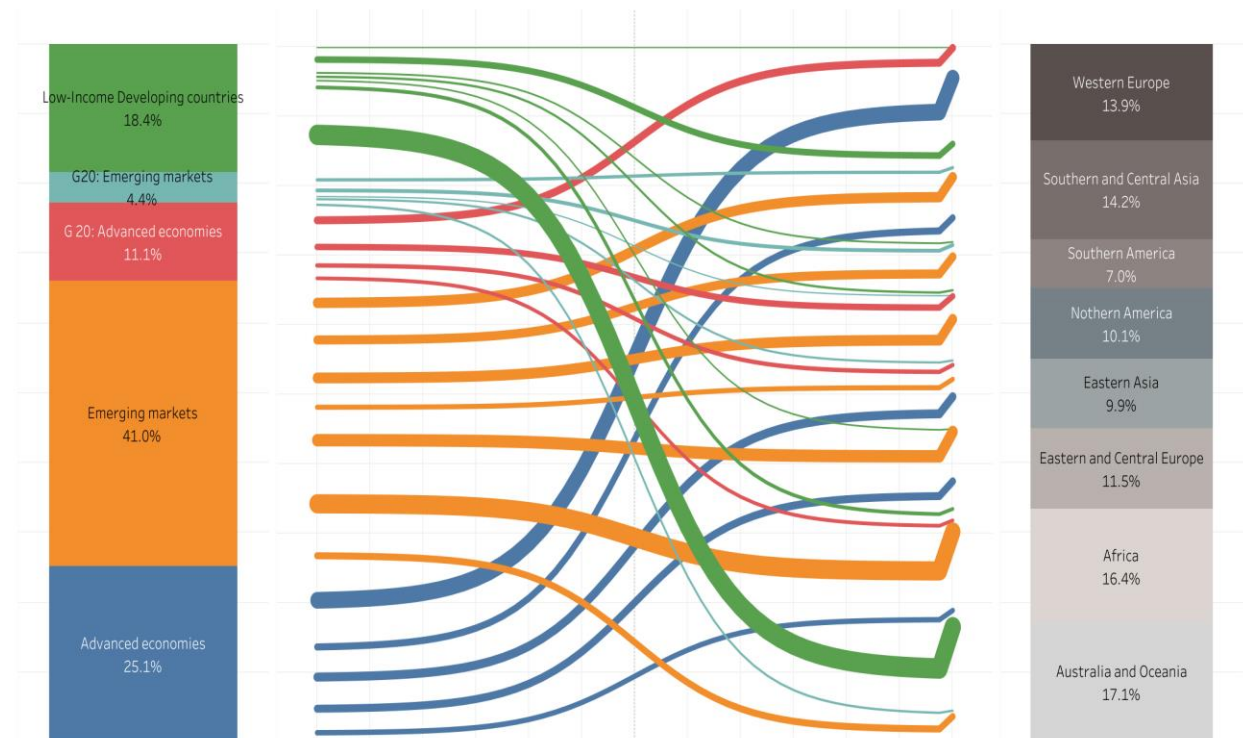


Figure 1. Public outflows of policy responses due to pandemic, % of total according to the level of country development and its regional division (data for the first half of 2020)  
Source: developed by the authors on the basis of IMF data, 2020

Table 1 reveals that the main support mechanism is presented by guarantees and some European countries allocate sources equaled more than 20 % of GDP, exemplified as Belgium, Czech Republic, France, Italy, Spain, United Kingdom (in some cases it was about 50 % of GDP).

The small amounts regarding financial policy support due to pandemic crisis were typical for such countries as Moldova, Bulgaria and Romania (less than 5 % of GDP), and Ukraine did not distribute any funds at all (see Table 1).

Taking into consideration that guarantees are the main policy which was implied for business recovery (see Table 1), it is useful to analyze the general trend of its allocation according to macro-regional division using system of quartiles, which is described on fig. 2.

Fig. 2 demonstrates that in majority of financial support cases the guarantees do not have any outliers and the financial support is evenly distributed between countries-representatives of which region, but countries of Western and Central Europe have great outliers, which confirms the fact that such countries as Germany, Italy, United Kingdom and Czech Republic allocated a lot of funds for business recovery, the measures of which will be analyzed in details later in the given research.

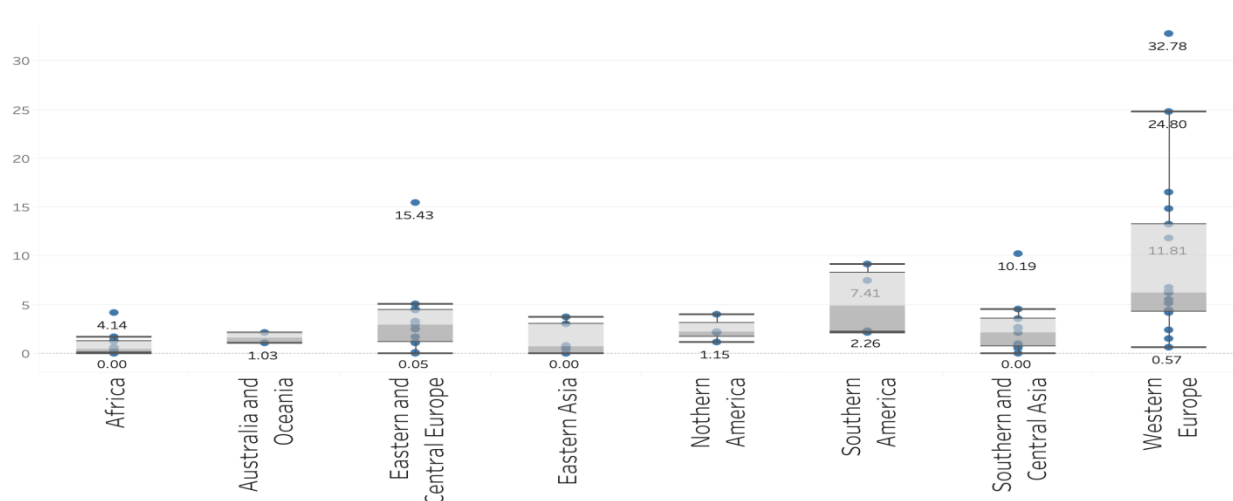


Figure 2. Guarantees' allocation due to pandemic according to regional division, % of GDP

Source: developed by the authors on the basis of IMF data, 2020

### Pandemic influence on macroeconomic situation in European countries

Along with the general spread trends of pandemic, macroeconomic indicators are important and the possible impact of pandemic crisis on their values in order to identify whether more developed countries (which are characterized by its macroeconomic stability), implemented more effective policy responses to support SMEs and their further development.

One of the main indicators that determine the level of economic potential of the country is the growth of real GDP and inflation, the annual change in these indicators as a percentage is given in table 2 and 3, which consider the dynamic trends of growth / decrease of GDP for Europe and Ukraine, where special attention is paid to the countries of Eastern and Central Europe, as these countries are in most cases neighboring Ukraine and have common features of the post-socialist features.

Table 2. Real GDP growth rate, %

Country	2017	2018	2019	2020, (first half)
<b>Countries of Southern Europe</b>				
Spain	2,9	2,4	2	-12,8
Portugal	3,5	2,6	2,2	-10
Greece	-1	0,5	1	-14
<b>Countries of Western Europe</b>				
Ireland	8,2	8,3	5,5	-6,8
Netherlands	2,9	2,6	1,8	-7,5
France	2,3	1,8	1,5	-9,8
Great Britain	1,9	1,3	1,5	-9,8
Germany	2,6	1,3	0,6	-6
<b>Countries of Central and Eastern Europe</b>				
Poland	4,9	5,3	3,1	-3,6
Slovenia	4,8	4,2	2,4	-6,7
Croatia	3,1	2,7	2,9	-9
Hungary	4,3	5,1	4,9	-6,1
Bulgaria	3,5	3,1	3,4	-4
Romania	7,1	4,4	4,1	-4,8
Czech Republic	5,2	3,2	2,3	-6,5
Ukraine	2,5	3,4	3,2	-7,2

Source: IMF data mapper

Data analysis table. 2 shows that the pandemic crisis has a significant impact on macroeconomic indicators, as evidenced by data for the first half of 2020, in particular a negative trend of declining GDP, which has negative values, which for some countries is 10-12%, for Ukraine, the rate of GDP decline is 7.2%.

Regarding the growth rate of the consumer price index, there are also unstable fluctuations in inflation, which indicates the overall level of deterioration of the economic situation in each of the analyzed countries.

For Ukraine, the level of change in consumer prices was 3.2%, which indicates a general level of declining purchasing power, which indicates that the pandemic crisis has affected the macroeconomic stability of each country. In the tables 4 and 5 such indicators as the balance of payments and the level of debt are analyzed in dynamics.

Table 3. Consumer price index growth rate, %

Country	2017	2018	2019	2020 (first half)
<b>Countries of Southern Europe</b>				
Spain	1,95	1,67	0,7	-0,3
Portugal	1,56	1,17	0,3	-0,2
Greece	-0,9	0,7	0,6	-2,0
<b>Countries of Western Europe</b>				
Ireland	0,7	0,7	0,9	-0,2
Netherlands	1,3	1,6	2,7	1,2
France	1,2	2,1	1,3	0,5
Great Britain	2,7	2,5	1,8	0,8
Germany	1,7	2	1,3	0,5
<b>Countries of Central and Eastern Europe</b>				
Poland	2,1	1,1	3,4	3,3
Slovenia	1,8	1,4	1,8	1,2
Croatia	1,1	1,5	0,8	0,3
Hungary	2,3	2,8	3,3	3,6
Bulgaria	1,8	2,3	3,1	0,5
Romania	1,3	4,6	3,8	2,9
Czech Republic	2,5	2,2	2,9	3,3
Ukraine	14,4	10,9	7,9	3,2

Source: IMF data mapper

Table 4. Balance of payments, % of GDP

Country	2017	2018	2019	2020 (first half)
<b>Countries of Southern Europe</b>				
Spain	2,7	1,9	1,96	0,5
Portugal	1,4	0,4	-0,1	0,16
Greece	-2,5	-3,5	-2,1	-7,7
<b>Countries of Western Europe</b>				
Ireland	0,5	10,6	-9,5	6,3
Netherlands	10,8	10,9	10,9	9
France	-0,8	-0,6	-0,7	-1,9
Great Britain	-3,5	-3,9	-4	-2
Germany	7,8	7,4	7,1	5,8
<b>Countries of Central and Eastern Europe</b>				
Poland	0	-1	0,4	3
Slovenia	6,2	5,9	5,7	4,5
Croatia	3,5	1,8	2,8	-3,2

Hungary	3,2	0,4	-0,8	-1,6
Bulgaria	3,5	1,4	4	1,9
Romania	-2,8	-4,4	-4,6	-5,3
Czech Republic	1,6	0,4	-0,4	-0,7
Ukraine	-2,2	-3,3	-2,7	4,3

According to table 4, many countries are characterized by a negative value and a significant deterioration in 2020 as a result of the pandemic crisis. Ukraine is characterized by a positive balance of payments for 2020, but the IMF forecast for 2021-2025 contains negative values for this indicator, proved the negative impact of pandemic on macroeconomic stability.

Table 5. Total debt level, % of GDP

Country	2017	2018	2019	2020 (first half)
<b>Countries of Southern Europe</b>				
Spain	98,6	97,6	95,5	123
Portugal	126,1	122	117,7	137,2
Greece	179,3	184,8	180,9	205,2
<b>Countries of Western Europe</b>				
Ireland	74,2	67,4	57,3	63,7
Netherlands	61,9	56,9	48,4	59,3
France	98	98,3	98,1	118,7
Great Britain	86,8	86,2	85,4	108
Germany	69,2	65	59,5	73,3
<b>Countries of Central and Eastern Europe</b>				
Poland	50,6	48,8	46	60
Slovenia	74,1	70,4	66,1	81
Croatia	77,8	74,7	73,2	87,7
Hungary	72,9	70,2	66,3	77,4
Bulgaria	23	20,1	18,6	24,1
Romania	36,8	36,4	36,8	44,8
Czech Republic	34,2	32,1	30,2	39,1
Ukraine	71,6	60,6	50,1	65,7

Source: IMF data mapper

Thus, according to the IMF data on the total level of debt for the first half of 2020 is characterized by a significant increase in debt compared to 2019, it should be noted that the data are available only for the first half of 2020, which may indicate that the overall level debt by the end of 2020 will increase.

This macroeconomic situation is a negative factor for business development, so each state must implement specific measures not only to support the medical sector, but also to support business, in particular the SME sector.

### **Analysis of implemented financial support measures for SMEs**

Table 6 provides a comparative analysis of the main business support measures by European countries in the period March-September 2020 due to the exacerbation of the pandemic crisis.



According to Table 6, most of the measures taken by the Ukrainian Government had a procedural nature with regard to the introduction of a moratorium on inspections, tax holidays, abolition of fines, deferral of register of settlement operations, rents` cancelling, which did not provide access to SME funding (Gontareva et al., 2021).

In European countries the first policy responses due to pandemic were developed in the middle of March, 2020 (more detailed in table 6).

The first business support program in *France* was implemented on March 19 at a time of record numbers of patients per day for this period of direct grants to allow micro-businesses to cover their operating costs in a difficult situation caused by the coronavirus pandemic. Companies with a maximum of 10 employees and an annual turnover not exceeding 1 million euros can receive a grant. Companies are eligible for a grant if their business was closed by an administrative decision due to a pandemic outbreak, or when their monthly turnover in March 2020 fell by 70% compared to the same period last year. The amount of direct grants may not exceed 3,500 euros per company.

On April 20, France launched the state program "French Umbrella", which is a support scheme for French SMEs through a wide range of support measures, including direct grants, repayable advances, state guarantees for loans and loans on favorable conditions.

Also, on May 11, an additional support program in the form of state guarantees was introduced, which was focused on French exporting companies with an annual turnover of less than 1.5 billion euros.

The first measure in the *United Kingdom* was launched on 25 March in response to the increase in the pandemic incidence for SMEs affected by the economic consequences of pandemic and having temporary financial difficulties, in the form of direct grants, differentiated by industry (more in table 6).

An additional support program in the form of direct grants, repayable advances and loans for SMEs and large businesses was also introduced on 6 April, with a gross grant not exceeding € 800,000 per enterprise. In addition, a program to support the self-employed entrepreneurs was approved on 11 May (see table 6).

The first business protection measure in *Germany* was introduced on March 16 in the first wave of the COVID-19 outbreak, which provided for the provision of subsidized interest rates on loans to any company to maintain liquidity. The following measures, adopted on March 21, were a continuation of the first wave of government support for business and related to loan guarantees for all types of business.

On April 21, Germany launched a business support program aimed at companies involved in

supporting R&D, testing and upgrading infrastructures to help develop the products needed to the pandemic outbreak response.

Due to the closure of the borders of many countries, the German government implemented a program to support businesses that are suffering from this situation. Thus, on June 11, a scheme of support for all operators of German airports in the form of direct and repayable grants, tax benefits or deferred payments was registered. And on June 19, a program that provides assistance to tour operators in the form of guarantees for vouchers issued to travelers who booked package tours until March 8, 2020, which had to be canceled due to the pandemic outbreak.

On April 3, *Poland* introduced the first business support program, regardless of size, in the form of a loan guarantee of up to PLN 250 million (approximately EUR 55 million) per borrower, with a guarantee of up to 80% of the loan (see table 6 for details). Also, on April 8, an additional program was introduced to support SMEs in the agricultural sector to restructure the debt of insolvent companies operating in the market for at least 3 years.

In addition, on April 10, a government program was adopted to cover part of the financial costs (percent) of private loans for companies that have experienced a liquidity crisis due to pandemic. In addition, Poland has implemented a comprehensive state support program on April 23 in the form of direct grants, refundable advances, tax benefits, tax deferrals, and pandemic-related wage subsidy schemes.

On April 27, an additional program to support the SME sector with a liquidity crisis was approved for advance compensation for losses caused by pandemic. The Polish government decided to launch an additional program on May 29 for financing in the form of subsidized loans related to investment and working capital needs for SMEs. Also, on 12 June, an additional measure of state support to the agricultural sector was introduced to subsidize interest on private loans for farmers (see table 6).

At the same time, a research support program focused on the modernization of pandemic infrastructure support were introduced on 18 June with a budget of around € 450 million. On July 23, 2020, the Polish government approved a program of guarantees for factoring (more details in table 6). In addition, on July 28, state aid was introduced in the form of a reduction in the annual fee for permanent use and benefits for rent, lease and use fee to support entrepreneurs affected by pandemic, regardless of the size of the business. On September 21, a program to support tour operators to compensate for losses from operating activities was launched.

In *Bulgaria*, the first Guarantee Facility was introduced on 8 April to support SME sector enterprises providing assistance in the form of government guarantees for individual SME loans or for SME loan portfolios transferred through credit institutions and other financial institutions (more details in table 6).

Also, on April 14, a program was introduced to help businesses in the most vulnerable sectors due to pandemic, such as retail, transport, restaurants and mobile food, tourism, sports and entertainment, etc. in the form of wage subsidies of up to 60% in order to prevention of rising unemployment.

On April 23, an additional program to support SME sector in the form of investment and quasi-investment instruments in equity was introduced to ensure the SME sector liquidity. In addition, a subsidy mechanism for micro and small enterprises between € 1,500 and € 5,000 per enterprise was introduced on 13 May. However, on June 26, a program was introduced to support medium-sized enterprises, which noted a reduction in turnover of at least 20% for one month in the period from February 1, 2020 compared to turnover for the same month in 2019, in the form of direct subsidies.

On July 14, an employment support program was introduced for all types of enterprises and self-employed persons with a maximum compensation of up to 80% of wages or income for both groups, respectively. Also, on 24 July, a mechanism was introduced to support loss-making tour operators (see table 6 for details), and a mechanism to support farmers affected by the pandemic crisis in the form of direct subsidies was launched on 27 August.

The first mechanism to support business due to the pandemic crisis was adopted by the Czech government on 14 April, which benefited the SME sector, to provide investment assistance for the relevant pandemic products. On May 7, a mechanism was introduced to subsidize research projects for the production of related products for Covid-19, more details in table 6.

On May 15, the government introduced a mechanism of state guarantee of new loans for enterprises with employment of less than 500 people, refinancing of old loans is not provided by this measure. On June 2, a mechanism was introduced to reimburse part of the rent payments to businesses.

On 26 June, a regional business support program was launched to provide restart vouchers for micro-enterprises and free admission to tourist attractions for all types of enterprises to support the tourism industry (see table 6).

On July 6, two programs were introduced: the first - sectoral support for agricultural, food and feed production in the form of business subsidies regardless of size and the second - benefits for the payment of social contributions for the self-employed, which provide benefits for pensions and state contributions employment policy, abolition of penalties related to late submission of annual reports and late payment of pensions and contributions to the state employment policy, deferral of monthly pension subscriptions and contributions to the state employment policy.

On July 27, the Czech Republic introduced a mechanism for wage subsidies during COVID-19 in two ways: 1) if the government has determined the termination of the enterprise, it

reimburses up to 80% of wages and 2) if the employer ceases to operate, it reimburses up to 60% wages.

On 24 August, the Czech authorities launched an employment support program to provide wage subventions for jobs created for the disadvantaged and employers who employ the unemployed in accordance with the objectives of the Operational Employment Program 2014-2020 (see table 6). On September 8, an additional program to support self-employed people for exemption from state health insurance was launched.

Thus, having analyzed the measures to support SMEs in Western Europe, in our opinion, some of them can be implemented in the emerging economies, in particular Ukraine, i.e. they have practical significance for modern Ukrainian realities, namely:

- provide state aid in the form of guarantees for loans to SMEs. But only if the company did not have difficulties until December 31, 2019, and faced difficulties during pandemic. The final beneficiaries can be only SMEs. With regard to the loan guarantee scheme, it is advisable to limit the maximum duration of the guarantee to 4 years, and set the term of the guarantee at 6 months from the date of implementation of this measure. To reduce the burden on the budget, we propose to act in cooperation not only with state but also with the largest private banks;

- provide financial assistance to micro and small enterprises that have suffered losses due to restrictions related to the pandemic outbreak and need funds to restore their market position, rebuild their business and re-employ staff. Provided to companies that:

- 1) employed 50 people or more; whose annual turnover is not more than 5 million euros;
- 2) were closed, and were affected by a decrease in turnover by 25% or more for the period April 1 - June 30, compared to any three-month period of 2019.

In Central and Eastern Europe, most of the measures to overcome the negative effects of pandemic were aimed at supporting businesses, in particular SME sector, and were mainly provided in the form of government loan guarantees, direct subsidies or comprehensive support programs, as well as wage subsidies. and support for the self-employed. Thus, taking into account the experience of European countries, we can say that for emerging markets (example – Ukraine) it would be appropriate to implement European experience in introducing state loan guarantees for financially stable enterprises in the SME sector in the pre-crisis period (2018-2019 financial years) and the principle of complementary loan repayment. mandatory participation of the company in the payment of interest.

As for direct subsidies, they should also be issued only to financially sustainable enterprises that have lost at least 20-30% compared to the same period in 2019 due to the pandemic outbreak to cover the costs of overcoming the funding gap and increasing liquidity. It is also useful to

apply European experience in implementing comprehensive support programs - anti-crisis measures in the form of direct grants, refundable advances, tax and concessional payments, deferrals of tax and wage subsidies, as well as sectoral business support for priority areas of development, for many countries. In Europe, separate programs have been introduced to support the agricultural sector, which is also appropriate for Ukraine given the strategic importance of this sector for economic development.

Table 6. Cross-cultural analysis of financial support measures during the pandemic crisis in Europe in the period March-September 2020

Country	Date	Measure type	Budget	The measure essence	Link
<b>Countries of Western Europe</b>					
Germany	March, 16	Interest subsidy	10 bln euro	Assistance will be provided to any enterprise in the form of subsidized interest rates on loans and will be partially directed through credit institutions.	<a href="https://ec.europa.eu/competition/state_aid/cases1/202013/285198_2141528_35_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202013/285198_2141528_35_2.pdf</a>
France	March, 19	"Fonds de solidarité" – scheme of direct grants for small businesses in temporary financial difficulties due to coronavirus outbreak	1.2 bln euro	Support takes the form of direct grants, which allow beneficiaries to cover their operating costs in a complex situation caused by a pandemic. Companies with a maximum of 10 employees and an annual turnover not exceeding 1 million euros can receive a grant. Companies are eligible for a grant if their business was closed by an administrative decision due to a coronavirus outbreak, or when their monthly turnover in March 2020 fell by 70% compared to the same period last year. The amount of direct grants may not exceed 3,500 euros per company.	<a href="https://ec.europa.eu/commission/presscorner/detail/en/ip_20_556">https://ec.europa.eu/commission/presscorner/detail/en/ip_20_556</a>
Germany	March, 21	Guarantee	-	This measure provides assistance to businesses in the form of loan guarantees.	<a href="https://ec.europa.eu/competition/state_aid/cases1/202013/285202_2142382_66_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202013/285202_2142382_66_2.pdf</a>
Germany	March, 21	Direct grant Return of advances Tax benefit Reduction of the tax base Tax deferral Reduction of the tax rate	45 bln euro	Assistance under the scheme will be provided in the amount of up to € 800,000 per enterprise in the form of direct grants, repayable advances and tax or payment benefits. The aid granted to enterprises engaged in the processing and marketing of agricultural products will depend on whether it is transferred in part or in full to primary producers. The aid will be limited to 120,000 euros per enterprise engaged in fisheries and aquaculture, or 100,000 euros per enterprise engaged in primary production of agricultural products. According to the German authorities, it is very difficult to calculate the scheme's budget, as it is impossible to quantify the impact of the pandemic on the German economy.	<a href="https://ec.europa.eu/competition/state_aid/cases1/202013/285205_2142884_55_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202013/285205_2142884_55_2.pdf</a>
United Kingdom	March, 25	Grant under the loan scheme during business	600 bln pounds	The measure is aimed at supporting SMEs that have suffered or are expected to suffer from the effects of pandemic. The cost of the grant does not exceed € 800,000 per SME on a gross basis. The grant does not exceed € 120,000 for an SME operating in the fisheries	<a href="https://ec.europa.eu/competition/state_aid/cases1/202014/285210_2143912_38_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202014/285210_2143912_38_2.pdf</a>

Country	Date	Measure type	Budget	The measure essence	Link
		interruption		and aquaculture sector or € 100,000 for an SME engaged in primary agricultural production.	
France	April, 20	"French umbrella" - a scheme of support for business	7 bln euro	French Umbrella is a support scheme for French companies of all sizes through a wide range of support measures, including direct grants, repayable advances, government guarantees on loans and soft loans. Target-SMEs and large corporations	<a href="https://ec.europa.eu/commission/presscorner/detail/en/ip_20_701">https://ec.europa.eu/commission/presscorner/detail/en/ip_20_701</a>
Germany	April, 21	Direct subsidy Return of advances Tax benefit or tax exemption	5 bln euro	This measure provides assistance in the form of direct grants, refundable advances and tax benefits to any enterprise involved in supporting research and development, testing and upgrading infrastructures that promote the development of relevant COVID-19 products and to support investment in the production of products needed to respond to the COVID-19 outbreak.	<a href="https://ec.europa.eu/competition/state_aid/cases1/202018/285722_2152196_87_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202018/285722_2152196_87_2.pdf</a>
France	May, 11	Guarantee scheme for small and medium-sized export companies	200 mln euro	Support in the form of state guarantees for French exporting companies with an annual turnover of less than 1.5 billion euros. The scheme aims to limit the risk associated with issuing financial guarantees to those exporting companies most affected by the economic impact of the coronavirus outbreak, thus ensuring the continuation of their activities.	<a href="https://ec.europa.eu/commission/presscorner/detail/en/ip_20_848">https://ec.europa.eu/commission/presscorner/detail/en/ip_20_848</a>
United Kingdom	May, 11	Direct grants (SEISS)	9 bln pounds	This measure aims to support lower-paid self-employed people whose incomes have been negatively affected by COVID-19. As a result of the crisis, there may be significant layoffs. This measure will cover a maximum of 12 months after the application for assistance (assistance will initially be provided for a period of 3 months, this period may be extended to 12 months).	<a href="https://ec.europa.eu/competition/state_aid/cases1/202020/285874_2156198_88_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202020/285874_2156198_88_2.pdf</a>
Germany	June, 11	Direct grant Tax deferral	1,36 bln euro	The scheme provides the following forms of support: - direct grants - repayable grants - loans - tax benefits or deferred payments For all operators of German airports that fall into the category of micro or small enterprises.	<a href="https://ec.europa.eu/competition/state_aid/cases1/202033/287537_2180954_47_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202033/287537_2180954_47_2.pdf</a>
Germany	June, 19	Гарантія	840 mln euro	The measure provides assistance in the form of guarantees for vouchers issued to travelers who booked package tours until March 8, 2020, which had to be canceled due to the COVID-19 outbreak. The voucher is provided for the amount corresponding to the payment made by the respective traveler.	<a href="https://ec.europa.eu/competition/state_aid/cases1/202032/287255_2178558_45_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202032/287255_2178558_45_2.pdf</a>
<b>Countries of Central and Eastern Europe</b>					
Poland	April, 3	loan guarantees	PLN 22 billion (about EUR 4.8 billion)	The Polish government estimates the budget of the event at 22 billion zlotys (approximately 4.8 billion euros), which will allow the Central Bank of Poland to issue guarantees of up to 100 billion zlotys (about 22 billion euros) for this measure. This amount of guarantee can be used to cover the total amount of loans up to PLN 125 billion (approximately EUR 27 billion).	<a href="https://ec.europa.eu/competition/state_aid/cases1/202015/285329_2145486_43_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202015/285329_2145486_43_2.pdf</a>
Bulgaria	April, 8	SME Guarantee Program	500 mln levs	Assistance in the form of government guarantees for individual SME loans or for SME loan portfolios transferred through credit institutions and other financial	<a href="https://ec.europa.eu/competition/state_aid/cases1/202015/285460">https://ec.europa.eu/competition/state_aid/cases1/202015/285460</a>

Country	Date	Measure type	Budget	The measure essence	Link
			(255 million euros)	institutions. This measure will provide guarantees for SMEs, which are transferred through credit institutions or other financial institutions, guaranteeing up to 80% of loans to beneficiary companies.	_2146849_41_2.pdf
Poland	April, 8	Debt restructuring of agricultural holdings in the SME sector	457.4 mln zlotys (about 100 mln euros)	Assistance will be provided in the form of loan restructuring, interest rate subsidies and guarantees. The Polish authorities estimate the total aid budget at PLN 240 million (approximately EUR 52.4 million) for loan restructuring, PLN 17.4 million (approximately EUR 3.8 million) for interest subsidies and PLN 200 million (approximately EUR 43.7 million). on warranty.	<a href="https://ec.europa.eu/competition/state_aid/cases1/202019/284484_2154410_73_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202019/284484_2154410_73_2.pdf</a>
Poland	April, 10	Grants intended to cover part of the financial costs (interest) of private loans	527,6 mln zl (about 115 mln euros)	The beneficiaries of the event are all enterprises that have suffered from the economic consequences of COVID-19 and have temporary financial difficulties due to lack of liquidity. The value of the subsidized interest rate on loans does not exceed EUR 800,000 per enterprise on a gross basis.	<a href="https://ec.europa.eu/competition/state_aid/cases1/202017/285474_2149886_54_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202017/285474_2149886_54_2.pdf</a>
Bulgaria	April, 14	Assistance in the form of wage subsidies	1.5 bln leva (767 mln euros)	The measure will be funded by the National Unemployment Insurance Fund to save jobs in the most affected sectors, which aims to increase the wage costs of companies that could lay off staff as a result of the COVID-19 outbreak. Under the aid scheme, the monthly wage subsidy paid to eligible businesses is 60% of the monthly gross wage (including employer's social security contributions) of the beneficiary staff.	<a href="https://ec.europa.eu/competition/state_aid/cases1/202016/285501_2148301_44_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202016/285501_2148301_44_2.pdf</a>
Bulgaria	April, 23	Assistance in the form of investments and / or quasi-investments	150 million euros	Assistance to support the liquidity of SMEs affected by the COVID-19 outbreak. Assistance will be provided in the form of investments and / or quasi-investments. In particular, relevant tools will include: - net equity investment: transferable shares, other securities or equivalent rights and instruments giving entitlement to an equity interest in the enterprise (ultimately including the redemption option), or - quasi-equity investments: convertible debt, such as debt with linked warrants or similar derivatives, conversion options embedded in the main contractual debt system, etc.	<a href="https://ec.europa.eu/competition/state_aid/cases1/202018/285584_2151302_61_3.pdf">https://ec.europa.eu/competition/state_aid/cases1/202018/285584_2151302_61_3.pdf</a>
Poland	April, 23	Anti-crisis measures - direct grants, repayable advances, tax and tax benefits, deferred taxes and wage	PLN 25.5 billion (EUR 5.6 billion)	Assistance will be provided under 11 schemes in the form of direct grants, refundable advances, tax and preferential payments, tax deferrals and wage subsidies: (1) Wage subsidies for employees; (2) co-financing of business activities for individuals who do not have employees; (3) Loan with a low interest rate (in the form of an advance to be repaid) to cover the costs of doing business for a micro-entrepreneur; (4) Co-financing the remuneration of persons employed by non-governmental organizations; (5) exemption from property tax; (6) extension of property tax payment deadlines; (7)	<a href="https://ec.europa.eu/competition/state_aid/cases1/202017/285396_2151002_48_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202017/285396_2151002_48_2.pdf</a>

Country	Date	Measure type	Budget	The measure essence	Link
		subsidy schemes related to COVID-19		Financial support for individuals, legal entities or organizational units without legal personality, if creative or artistic activity cannot be continued in its current form during the period of the emergency epidemic; (8) exempt from payments for rent or lease of state real estate; (9) Refusal to collect civil law claims and obligations related to local self-government or its organizational units; (10) Exemption from payment of unpaid compulsory social insurance and health insurance contributions; (11) Wage subsidies for workers with disabilities and support materials related to COVID-19.	
Poland	April, 27	advance reimbursement scheme for micro, small and medium enterprises	PLN 75 billion (EUR 16.6 billion)	The amount of assistance depends on the number of employees within 12 months from the date of assistance. The level of employment is the basis for calculating the amount of assistance, determined based on its value at the end of the month preceding the application for assistance. However, it should not be higher than the level of employment as of December 31, 2019 or the level of employment at the end of the relevant application month in the previous year. The estimated average amount of aid will be around PLN 72,000 (EUR 16,000) and a maximum of PLN 324,000 (EUR 72,000) per micro-enterprise.	<a href="https://ec.europa.eu/competition/state_aid/cases1/202018/285702_2151574_32_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202018/285702_2151574_32_2.pdf</a>
Bulgaria	May, 13	Direct subsidies for micro and small enterprises	88 mln euros (173 mln levs)	Assistance under this measure will be provided in the form of a subsidy. The minimum amount of subsidy for the company is 1,530 euros (3,000 levs), and the maximum is 5,102 euros (10,000 levs). However, the amount of the grant may not exceed 10% of the net income from the income statement for 2019.	<a href="https://ec.europa.eu/competition/state_aid/cases1/202020/285959_2156271_43_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202020/285959_2156271_43_2.pdf</a>
Czech Republic	May, 15	Assistance in the form of loan guarantees for companies with up to 500 employees	150 bln CZK (5.5 bln euros)	The state guarantee will cover losses incurred due to new working capital loans. Guaranteed credit is not used to refinance existing loans. Loans may be concluded during the period specified in the article. The duration of loans is not limited. The maximum principal amount of the loan is CZK 50,000,000 (approximately EUR 1.9 million).	<a href="https://ec.europa.eu/competition/state_aid/cases1/202021/286080_2157193_34_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202021/286080_2157193_34_2.pdf</a>
Poland	May, 29	Assistance in the form of loans at reduced interest rates in combination with assistance to compensate for damage caused by Covid-19	7.5 billion zlotys (1.6 billion euros)	The measure provides funding in the form of subsidized loans related to investment needs and / or working capital, lasting a maximum of four years. For loans with a maturity of more than 31 December 2020, the total amount of loans per beneficiary will not exceed: (a) the beneficiary's double annual salary fund (including social benefits as well as staff costs) for 2019. In the case of enterprises established on or after January 1, 2019, the maximum credit shall not exceed the estimated annual wage rate for the first two years of operation; or (b) 25% of the total turnover of the beneficiary in 2019.	<a href="https://ec.europa.eu/competition/state_aid/cases1/202023/285705_2161296_70_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202023/285705_2161296_70_2.pdf</a>
Cze	June,	Entrepreneu	5 bln	This measure provides assistance in the form of direct	<a href="https://ec.europa.eu/c">https://ec.europa.eu/c</a>



Cou ntr y	Date	Measure type	Budge t	The measure essence	Link
ch Rep ubli c	2	rship support program affected by the spread of COVID 19 (rents)	CZK (about 184.3 mln euros)	grants. These direct grants will amount to 50% of the initial rent or lease payable for the months of April, May and June 2020. They depend on the tenant and the landlord agreeing before applying for a 30% reduction in the monthly rent or rent for the relevant period and on the tenant who has paid 50% of the original rent for the same period.	ompetition/state_aid/c ases1/202023/286328 _2161375_62_2.pdf
Pola nd	June, 12	Aid in the form of interest subsidies on private loans for farmers	40 mln PLN (EUR 9.04 mln)	The aid must be equivalent to a direct grant paid in installments. The beneficiaries of the event are enterprises engaged in primary agricultural production in Poland, or enterprises that ceased these activities after February 1, 2020, in accordance with national measures taken to limit the spread of coronavirus. The estimated number of beneficiaries is over 1000.	<a href="https://ec.europa.eu/competition/state_aid/cases1/202025/286427_2164104_45_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202025/286427_2164104_45_2.pdf</a>
Bul gari a	June, 26	Aid in the form of direct subsidies for medium- sized enterprises	102 million euros (200 million levs)	102 million euros (200 million levls), from the state budget in the amount of 15 million euros and 87 million euros from the ESF.  The beneficiaries of the event are medium-sized enterprises, economically active for at least two completed financial years (2018 and 2019), which recorded a decrease in turnover of at least 20% for one calendar month in the period from February 1, 2020 to the month preceding the month of application, compared with turnover for the same month in 2019.	<a href="https://ec.europa.eu/competition/state_aid/cases1/202027/286824_2168653_44_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202027/286824_2168653_44_2.pdf</a>
Cze ch Rep ubli c	July, 6	Aid to mitigate the effects of COVID-19 on agricultural, food and feed production	10 bln Czech crowns (370 mln euros)	Under this measure, assistance will be provided through a framework program of subsidies, which aims to mitigate the negative impact of emergency measures taken at the national level. Eligible companies will receive the following benefits: (1) total revenue of at least 25% compared to the same period in 2019; (2) operating results of operations (according to the designation of items in the income statement) not less than 25% compared to the same period in 2019. The amount of assistance is estimated at up to 200,000 CZK per business (approximately 7,450 euros) and up to 20,000 kroons per colleague or employee (approximately 745 euros).	<a href="https://ec.europa.eu/competition/state_aid/cases1/202029/286899_2173868_30_6.pdf">https://ec.europa.eu/competition/state_aid/cases1/202029/286899_2173868_30_6.pdf</a>
Cze ch Rep ubli c	July, 6	Benefits for the payment of social security contributions for the self- employed	15 bln CZK (about 551 mln euros)	The event provides assistance to self-employed persons in the form of: (1) benefits in the payment of pension contributions and contributions to the state employment policy  (2) abolition of penalties related to late submission of annual reports and late payment of pensions and contributions to state employment policy, (3) deferral of monthly subscriptions to pensions and contributions to state employment policy.	<a href="https://ec.europa.eu/competition/state_aid/cases1/202028/285765_2170965_53_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202028/285765_2170965_53_2.pdf</a>
Bul gari a	July, 14	Short-term employment support in response to the COVID- 19 pandemic	40 mln levs (20.5 million euros)	The beneficiaries of the measure are businesses and the self-employed working in sectors particularly affected by the COVID-19 outbreak. The monthly wage subsidy paid to eligible businesses and the self-employed is BGN 290 per employee or self-employed person. The Bulgarian authorities confirm that the maximum benefit is 80% of the employee's monthly gross salary	<a href="https://ec.europa.eu/competition/state_aid/cases1/202030/286985_2175170_94_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202030/286985_2175170_94_2.pdf</a>

Country	Date	Measure type	Budget	The measure essence	Link
				(including the employer's social security contributions) or income equivalent to the self-employed person's salary.	
Poland	July, 23	Guarantees for factoring	PLN 11.5 bln (EUR 2.6 bln)	This guarantee scheme covers specific factoring products. Poland estimates that between 4,000 and 5,000 factoring users who use these services in lieu of renewable loans may be eligible for the guarantee. The guarantee is provided through factors as intermediaries.	<a href="https://ec.europa.eu/competition/state_aid/cases1/202031/287222_2177132_36_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202031/287222_2177132_36_2.pdf</a>
Czech Republic	July, 27	Wage subsidies	22.9 bln CZK (about 866.4 mln euros)	The measure beneficiaries are all companies that hire staff, except for employers, whose salary costs are covered from state budgets. The amount of the wage subsidy depends on the type of obstacles at work: (a) in regime A, the wage subsidy is 80% of the wage cost, but only up to a maximum of CZK 39,000 (approximately EUR 1,476) per employee per month. (b) under regime B, the wage subsidy is 60% of the wage cost, but only up to a maximum of CZK 29,000 (approximately EUR 1,097) per employee per month.	<a href="https://ec.europa.eu/competition/state_aid/cases1/202031/287307_2176887_119_2.pdf">https://ec.europa.eu/competition/state_aid/cases1/202031/287307_2176887_119_2.pdf</a>
България	August, 27	Assistance in ensuring the liquidity of farmers	56.58 mln leva (about 29 mln euros)	This measure provides assistance in the form of direct subsidies to ensure the liquidity of beneficiaries affected by the COVID-19 outbreak. The measure is available for primary agricultural production, including the breeding of small and large ruminants and the cultivation of potatoes throughout Bulgaria. The amount of aid may not exceed 100,000 euros (195,583 leva) per beneficiary.	<a href="https://ec.europa.eu/competition/state_aid/cases1/202035/287634_2184419_53_4.pdf">https://ec.europa.eu/competition/state_aid/cases1/202035/287634_2184419_53_4.pdf</a>

Source: formed by the authors

## Conclusion

The impact of the pandemic crisis is analyzed on the basis of macroeconomic indicators in the European countries, on the basis of which the negative impact of the pandemic on economic development at the national level was revealed. An analysis of vector support measures for SMEs in European countries due to the limitations of its activities in response to overcoming the pandemic around the world was conducted. The SME support measures implemented in Ukraine during the COVID-19 pandemic were analyzed and it was found that most of the measures taken by the Ukrainian Government were procedural in nature to introduce a moratorium on inspections, tax holidays, abolition of fines, deferral of registers of payment operations. As for the experience of European countries, financial mechanisms of variable state support for SMEs have been introduced, such as loan guarantees, capital financing, salary reimbursements, etc.

This analysis allowed to develop recommendations for state support for the SME sector in Ukraine based on the introduction of such mechanisms as loan guarantee; mutual responsibility of companies simultaneously with the state for fulfillment of credit obligations; providing grants

and subsidies. The outlined mechanisms should be applied only to those SMEs that were financially stable in the pre-pandemic period and lost at least 30% of turnover due to the imposed restrictions on business suspension. The implementation of these recommendations will avoid the risk of business closure.

Recommendations for improving approaches to anti-crisis state regulation of SME development by providing vector support to overcome the effects of the economic crisis due to the pandemic, which include the introduction of loan guarantee instruments with a complementary principle of repayment and subsidization of business with specific criteria (financially stable and rentable) pre-crisis period. These recommendations will allow public authorities to respond on the challenges of the pandemic crisis in order to prevent a significant level of insolvency of the SME sector.

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