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Ivo J. M. Arnold

# The Activation Conditions of the Transmission Protection Instrument: Flawed by Design?

**In 2022, the European Central Bank (ECB) introduced the Transmission Protection Instrument (TPI) to counter the risk of financial fragmentation following the normalisation of monetary policy. The ECB has specified conditions under which the TPI can be activated. This paper examines these conditions and concludes that the activation conditions cannot be applied in an objective and transparent manner. This provides the ECB room for policy discretion and makes the ECB susceptible to pressure from member countries. A possible interpretation is that the activation conditions serve as a fig leaf to cover ECB policies that may go beyond its mandate.**

On 9 June 2022, the European Central Bank (ECB) decided to terminate its asset purchase programmes and outlined a path for future interest rate hikes (ECB, 2022a). Less than a week later, a sharp increase in risk premiums on Italian government bonds prompted the ECB to announce the introduction of a new "anti-fragmentation" tool following an emergency board meeting (ECB, 2022b). Subsequently, on 21 July, the ECB unveiled the Transmission Protection Instrument (TPI) (ECB, 2022c). This new instrument is intended to enable the ECB to control sovereign spreads of euro area countries by buying up government debt from countries whose interest rates are deemed to be out of step with macroeconomic fundamentals. The ECB's justification for introducing the TPI is that diverging yields on sovereign debt may hamper the transmission of monetary policy across the euro area and increase the risk of fragmentation.

Since July 2022, the ECB has continued to use the temporary Pandemic Emergency Purchase Programme (PEPP) as a first line of defence for risks to the transmission mechanism, by flexibly reinvesting bond redemptions. The TPI can be seen as a more permanent instrument to control sovereign spreads. A similarity between the PEPP and the TPI is that both involve asset purchases that deviate from countries' shares in the ECB's capital, the so-called capital key quota. In contrast to the PEPP, however, the ECB has specified conditions under which activation of the TPI is warranted.

The introduction of the TPI has been met with criticism from both an economic and a legal perspective (Bernoth et al., 2022; Feld et al., 2022). A role for the ECB in limiting the risk of fragmentation is not self-evident. The Economic and Monetary Union (EMU) is an incomplete currency union by design. It has a common currency, but lacks a common fiscal policy. Each country is responsible for its own national debt. This is clearly laid down in the Maastricht Treaty, as exemplified by the no-bailout clause and the ban on monetary financing. This means that bond investors run credit risks on sovereign debt, as holders of Greek sovereign debt have experienced following the debt restructuring in 2012. This also means that risk premiums can arise on sovereign debt, depending on how financial markets assess credit risk. Fragmentation risk is thus ingrained in the currency union. Spread control could then be viewed as a form of fiscal support, which is not within the ECB's mandate. Seen from this perspective, one can question whether it is up to the ECB to complete the monetary union under the guise of transmission protection.

To deflect this criticism, the ECB has stipulated two requirements to be met before the TPI can be activated. The first requirement is that the TPI can be activated "to counter unwarranted, disorderly market dynamics that pose a serious threat to the transmission of monetary policy across the euro area" (ECB, 2022d). The TPI will enable the



**Ivo J. M. Arnold**, Erasmus School of Economics, Erasmus University Rotterdam, The Netherlands.

Eurosystem to purchase assets "in jurisdictions experiencing a deterioration in financing conditions not warranted by country-specific fundamentals" (ECB, 2022d). Second, the ECB should assess whether "jurisdictions in which the Eurosystem may conduct purchases under the TPI pursue sound and sustainable fiscal and macroeconomic policies" (ECB, 2022d). For this assessment, the ECB will consider four criteria: compliance with the EU fiscal framework, absence of severe macroeconomic imbalances, fiscal sustainability and sound and sustainable macroeconomic policies. In the remainder of this paper, we call these two requirements the conditions for TPI activation.[1] TPI conditionality aims to quell any criticism that the programme amounts to fiscal support. Moreover, by stressing the importance of the TPI to safeguard the monetary transmission mechanism, the ECB can argue that the TPI contributes to achieving its price stability objective.

This paper examines whether TPI conditionality makes sense from an economic point of view. We first look at the theoretical case for the TPI in the presence of sound fundamentals yet disorderly market sentiment. We next consider whether adherence to the conditions for activation would allow the ECB to safeguard the monetary transmission. Finally, we discuss whether these conditions can be applied in an objective and transparent manner.

## The macroeconomic case for the TPI

Since the normalisation of ECB policy, sovereign spreads between euro area countries have widened. Research has shown that the ECB's asset purchase programmes have had a dampening effect on interest rate differentials (Lombardi et al., 2018; Wright, 2019; Havlik et al., 2021; Eijffinger and Pieterse-Bloem, 2022). Even though President Lagarde claimed in March 2020 that the ECB "is not here to close spreads" (Financial Times, 2020), in practice spread reduction has been a consequence of the ECB's unconventional monetary policy. When monetary policy returns to normal, sovereign spreads may widen and fragmentation risk may increase.

Most authors define fragmentation as bond market fragmentation, i.e. the divergence of nominal interest rates on euro area countries' sovereign debt (Claeys et al., 2022; Bernoth et al., 2022; Angeloni and Gros, 2022). One could argue for a broader definition of fragmentation risk, encompassing the divergence in borrowing costs for firms and households. This perspective is relevant for the ECB, which shapes monetary policy to influence financing conditions in the private sector. If the normalisation of monetary policy leads to a sharper increase in mortgage rates or corporate lending rates in heavily indebted countries within the euro area, the uniform impact of monetary policy across the union would be compromised. Such a scenario would pose a concern for the ECB and undermine the unity of its monetary policy. Expanding the definition further, it is important to consider that the relevant interest rate affecting spending decisions by firms and households is the real interest rate, rather than the nominal interest rate. The real rate is also the one that is featured in macroeconomic models.

From a macroeconomic perspective, the real risk of fragmentation is that it may set in motion a process of economic destabilisation. Below, we illustrate this using the IS-MP-PC model (i.e. the income-spending/monetary policy/Phillips curve model), adapted to the case of the monetary union. The model consists of three equations (see e.g. Stevenson and Wolfers, 2023). The income-spending (IS) curve in equation (1) relates output ($y$) to the expected real interest rate ($r$) – defined as the difference between the nominal interest rate ($i$) and expected inflation ($\pi^e$) – and a demand shock ($\varepsilon_1$):

$$y = \alpha_0 - \alpha_1 r + \varepsilon_1, \qquad \alpha_1 > 0. \tag{1}$$

Equation (2) is a short-run aggregate supply curve or Phillips curve (*PC*). It relates inflation ($\pi$) to expected inflation, the output gap (defined as the difference between output and the natural level of output, $y_N$) and a temporary supply shock ($\varepsilon_2$):

$$\pi = \pi^e + \beta\left(y - y_N\right) + \varepsilon_2, \qquad \beta > 0. \tag{2}$$

The model is closed with a single-mandate monetary policy (*MP*) reaction function that assumes that the central bank targets inflation only. In equation (3), the monetary authorities set the policy rate in such a way that the real rate is increased while lagged inflation remains above the target rate of inflation ($\pi_T$):[2]

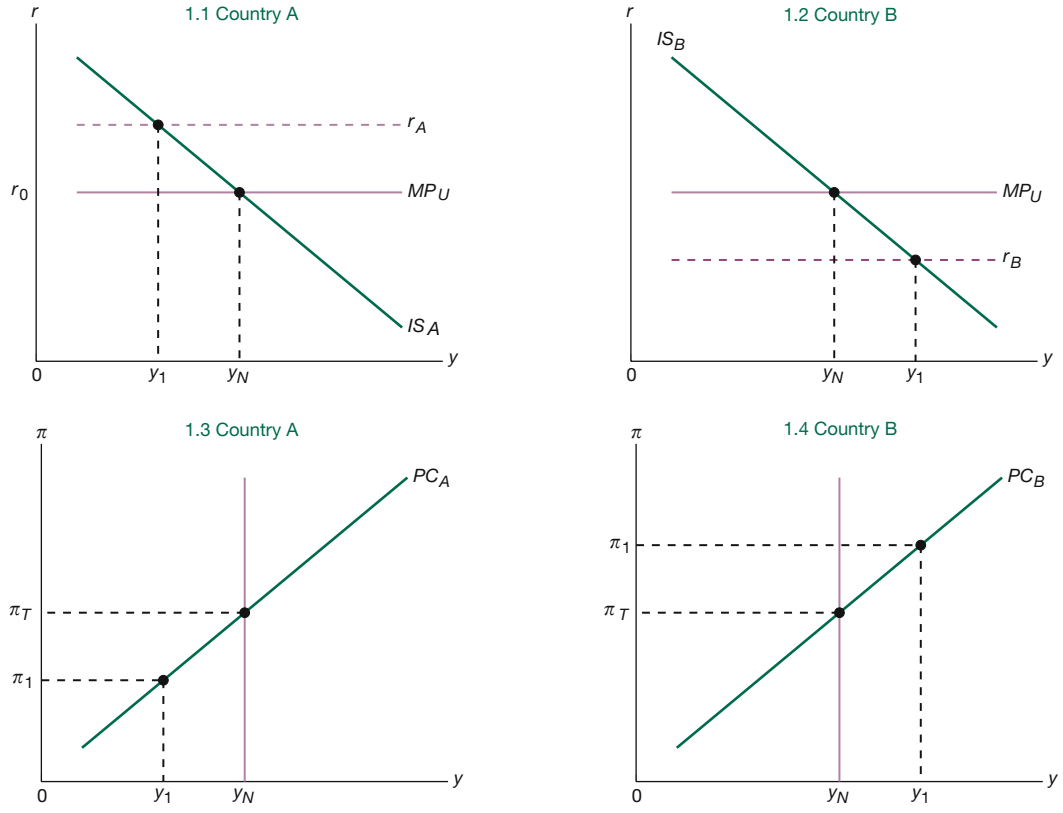
$$r = r_{-1} + \gamma\left(\pi_{-1} - \pi_T\right), \qquad \gamma > 0. \tag{3}$$

Macroeconomic equilibrium is attained when output is at the natural level and inflation expectations are anchored at the target inflation. Within a monetary union, the centralisation of policymaking precludes deriving a monetary policy reaction function for each region. The

1 This is not to be confused with the conditionality attached to support from the European Stabilisation Mechanism or from the Outright Monetary Transactions programme, which typically requires recipient countries to commit to a programme of economic reforms.

2 Using a more elaborate reaction function according to some version of the Taylor rule, the policy rate would also increase in the presence of a positive output gap.

Figure 1
**Asymmetric financial shocks in the IS-MP-PC model**




Note: IS-MP-PC model stands for the income-spending, monetary policy and the Phillips curve model.

Source: Author's representation.

determinants of the nominal policy rate are union-wide variables. In equation (3), the sole determinant is the deviation of union-wide inflation from the ECB's target inflation. In this setting, a situation may arise in which regional lending conditions start to diverge. Such fragmentation is discussed in the context of a monetary union using a stylised two-country version of the IS-MP-PC model.

We examine the transmission of asymmetric financial shocks resulting from unwarranted, disorderly market dynamics. As discussed above, this has been the ECB's main justification for the introduction of the TPI. In the two-country model, the regional real interest rate is no longer fully determined by the central bank, but depends on the nominal policy rate and regional inflation expectations. Following Stevenson and Wolfers (2023), we add financial shocks to the real rate by introducing a region-specific risk premium. The regional MP-curve then becomes:

$$r_i = i_U - \pi^e{}_i + \rho_i, \qquad i = [\mathrm{A}, \mathrm{B}], \tag{4}$$

where $r_i$ denotes the regional real interest rate, $i_U$ the union-wide nominal policy rate, $\pi^e{}_i$ the regional expected inflation, $\rho_i$ the region-specific risk premium and subscript $i$ denotes countries A and B. Fragmentation in lending conditions may result from divergences in inflation expectations and/or risk premiums. Figure 1 illustrates the dynamics in the case that unwarranted disorderly market dynamics lead to capital flows from country A to B. When financial markets perceive country A to be risky, investors will demand a positive risk premium $\rho_A$. In contrast, country B may benefit from a safe-haven effect (negative $\rho_B$). As a result, a spread between $r_A$ and $r_B$ emerges (see Figures 1.1 and 1.2). Along the IS-curves, output decreases (increases) in country A (B), resulting in deflationary (inflationary) pressures through the PC-curves (Figures 1.3 and 1.4).

Further destabilising dynamics may result from a de-anchoring of regional inflation expectations. When inflation expectations in country A (B) adjust to the lower (higher) inflation at $\pi_1$, the PC-curve shifts downwards (upwards) and the real interest rate $r_i$ increases (decreases), exac-

erbating the cyclical divergence and the fragmentation of lending conditions.[3] In addition, the output drop in country A might further increase the anxiety in the financial markets, raising the country's risk premium. It is this self-fulfilling destabilising effect of fragmentation that the ECB's TPI seeks to prevent, through intervention in the bond markets to reduce the risk premiums and bring $r_A$ and $r_B$ in line with $MP_U$. This theoretical case would adhere to the activation conditions specified by the ECB.

Figure 1 presents a stylised version of the macroeconomic dynamics within a monetary union, which can be expanded along the following lines. First, financial market disorder could interact with asymmetric economic shocks in such a way that a negative demand shock triggers an increase in the risk premium. This would exacerbate the destabilising dynamics. Second, this interaction will also depend on the state of public finances. In the presence of a high public debt ratio, countries may fall into a debt trap, whereby a combination of low economic growth and high interest rates projects an unsustainable path for the debt-to-GDP ratio. Third, divergences in real borrowing rates may lead to wealth effects with macroeconomic implications. A booming regional economy with high economic growth and low real interest rates may lead to an increase in housing prices. Such an increase in homeowners' wealth stimulates consumption through balance sheet effects. The low labour mobility in Europe reduces arbitrage between national housing markets. Divergences in regional housing wealth are therefore likely to occur within Europe, as we have seen prior to the sovereign debt crisis.

Finally, we add a stabilising effect. Within the union, the real exchange rate channel remains intact. The competitive position of a booming region will deteriorate, not via changes in the nominal exchange rate but via a change in the price ratio. In contrast, the competitive position of a depressed region will improve through internal devaluation. These changes in competitiveness will be reflected in next exports, shifting the IS-curve in country A (B) to the right (left). The absence of swift adjustment through the nominal exchange rate will, however, reduce the size and speed with which the real exchange rate adjusts (Arnold and Kool, 2004). The sovereign debt crisis has also shown that this is a slow adjustment channel.

## The conditionality of the TPI

This section discusses the TPI's conditionality based on Table 1, which contains four possible scenarios depending on whether the two activation conditions have been met. A discussion of logically consistent scenarios requires the dissection of the first condition based on the adjectives "unwarranted" and "disorderly". In the remainder, "unwarranted" will be interpreted as not in line with macroeconomic fundamentals, whereas "disorderly" refers to sudden, sizable increases in sovereign spreads. Before examining whether the activation conditions make the TPI an effective instrument to safeguard the transmission of monetary policy, we first discuss each of the four scenarios.

Table 1
**Conditions for Transmission Protection Instrument activation, possible scenarios**

| | | Market dynamics | | | |
|---|---|---|---|---|---|
| | | Unwarranted | | Warranted | |
| | | Disorderly | Orderly | Disorderly | Orderly |
| Fiscal and macroeconomic policies | Sound and sustainable | A TPI activation | N.A. | N.A. | B Goldilocks |
| | Unsound and unsustainable | N.A. | C Complacency | D Crisis | N.A. |

Notes: Unwarranted is interpreted as not in line with macroeconomic fundamentals. Disorderly refers to sudden, sizable increases in sovereign spreads. N.A.: not applicable; these are logically inconsistent scenarios.

Source: Author's elaboration.

Under scenario A, both conditions for TPI activation have been met. Disorderly market dynamics threaten to destabilise a country, even though the country pursues sound and sustainable macroeconomic policies. This scenario fits in a continental European tradition of blaming speculators for crises in financial markets.[4] In this line of reasoning, market interest rates do not always accurately reflect fundamentals. In theory this could give rise to a so-called bad equilibrium, in which unfounded pessimism in the financial markets drives up interest rates to such an extent that the debt-to-GDP ratio enters an unsustainable trajectory. A country can then either take harsh austerity measures or decide not to repay the debt. In both cases, the pessimism of the markets becomes self-fulfilling (De Grauwe and Ji, 2013). In this line of reasoning, unpredictable market sentiment is the source of economic instability, justifying intervention by the ECB.

Scenario B is a "Goldilocks" scenario, in which euro area member states credibly pursue sound fiscal and macroeconomic policies. Sovereign spreads are low, reflecting

3 These shifts are not shown in Figure 1, in order not to clutter the graph.

4 The currency crises in the European Monetary System in the early 1990s are a classic example.

the soundness of countries' economic policies. In this scenario, there is no need for the ECB to intervene. Under the remaining scenarios C and D, countries pursue economic policies which may compromise the stability of the monetary union. In scenario C, labelled "Complacency", financial markets do not recognise or react to unsound policies of member states. Sovereign spreads remain low, notwithstanding the deterioration in their macroeconomic fundamentals. An example of such unwarranted orderly market sentiment is the period prior to the Global Financial Crisis, when euro area sovereign spreads remained small, yet macroeconomic imbalances were building up. Finally, in scenario D, financial markets correctly price in the higher default risk associated with member states' unsustainable policies. This is an example of warranted disorderly market sentiment. This combination of unsustainable policies and adverse market sentiment would trigger a crisis in the euro area.

We next discuss whether the activation conditions allow the ECB to effectively use the TPI to counter fragmentation risk and safeguard the transmission of monetary policy. A first observation is that with conditionality, the TPI does not eliminate fragmentation risk. Only if disorderly market sentiment were not in line with fundamentals (scenario A), would the ECB activate the TPI. If fragmentation results from warranted disorderly market sentiment (scenario D), the instrument would not be activated. An important empirical question is then whether disorderly market dynamics unconnected to fundamentals are an important characteristic of the euro area bond markets. If the theoretical case of self-fulfilling yet unwarranted speculative attacks has little empirical support and negative market sentiment can always be linked to deteriorating fundamentals, the TPI would be irrelevant.

The ECB has not specified how it will determine whether financing conditions are unwarranted by fundamentals. It is not straightforward to prove that sovereign spreads are disconnected from fundamentals. Econometric models, as in Bernoth et al. (2022), may establish a relationship between sovereign spreads and macroeconomic variables. The unexplained part could then be interpreted as unwarranted market sentiment. However, this approach runs into the methodological problem that a single realisation of a country's macroeconomic path inside the EMU is compared to financial variables that at each point in time consider a probability distribution of all possible paths that a country could have taken.[5] Bond markets discount the consequences of multiple future scenarios regarding a country's macroeconomic policies, only one of which will materialise. Instances of seemingly unwarranted disorderly market sentiment might thus be linked to fundamental uncertainty about a country's economic direction and its prospects inside the monetary union. For example, sovereign spreads may be more volatile around elections in periphery euro area countries, when investors worry that newly elected politicians may pursue unsound macroeconomic policies.

As forward-looking bond markets price in uncertain future scenarios, qualifying market sentiment as unwarranted implies that the ECB has superior information on how the future will evolve. While financial markets can be wrong about sovereign risk, the question is whether the ECB can do better. Debt sustainability analysis is the main forward-looking tool that policymakers have at their disposal to assess fiscal soundness, and it depends on various assumptions regarding the future trajectory of economic growth, interest rates, inflation and fiscal and macroeconomic policies. Assessing debt sustainability poses significant challenges due to the need to make predictions about future events, which are often highly uncertain or even impossible to accurately forecast (Wyplosz, 2011; Heimberger, 2023). In short, the forward-looking nature of bond pricing and the limitations of debt sustainability analysis will make it difficult to apply the activation conditions in an objective and transparent manner.

Finally, there are four additional drawbacks to using the TPI and its activation conditions: price distortion, moral hazard, endogeneity and asymmetry. By using the TPI, the ECB interferes in the price formation in the euro area bond markets. Spread control will thus lead to price distortion and reduce the information value of euro area bond prices. A related risk is that spread control creates moral hazard (Feld et al., 2022). Absent market discipline, governments may steer policies towards an unsustainable path. When markets rely on the ECB to reduce spreads, a combination of macroeconomic imbalances and market complacency (scenario C) may materialise. The outcome of debt sustainability analysis will be endogenous to ECB policy. As the government bond yield is a key variable in debt sustainability analysis, activation of the TPI will influence the outcome of such an analysis. This results in circularity: by intervening, the ECB will positively affect a country's score on the fiscal criteria for TPI intervention, enabling the ECB to justify its intervention. Finally, the TPI and its activation conditions are by design asymmetric. As long as market sentiment is "orderly", the ECB will not activate TPI, even when markets suffer from a bout of unfounded optimism. In the run-up to the global financial crisis, yields on southern periphery public debt were very close to yields on German Bunds, yet inflation rates in periphery countries were relatively high. At

5 This problem is akin to Kleidon's (1986) critique in the debate about excessive stock market volatility.

that time, one could have argued that the low sovereign spreads were not in line with fundamentals and resulted in real interest rates that were too low and destabilised these economies. For a uniform transmission of monetary policy, these countries needed higher real interest rates. It is hard to imagine that the ECB will intervene to widen spreads when markets are overly optimistic. By focusing on disorderly market sentiment, the TPI's conditionality precludes this. The asymmetric nature of TPI thus creates a bias towards low sovereign spreads.

## Conclusions

As asymmetric financial shocks have the potential to destabilise the EMU, it is understandable that monetary policymakers are concerned about fragmentation risk. In the absence of a full fiscal union, the elimination of bond market fragmentation will be difficult. The TPI has been introduced to counter the risk that fragmentation poses to the transmission of monetary policy in Europe. While the TPI can be interpreted as an attempt to repair the union's incompleteness, it makes the ECB vulnerable to legal challenges. Two activation conditions should protect the ECB from legal action. First, TPI activation should counter "unwarranted, disorderly market dynamics that pose a serious threat to the transmission of monetary policy across the euro area" (ECB, 2022d). Second, the ECB will assess whether countries "pursue sound and sustainable fiscal and macroeconomic policies" (ECB, 2022d).

This paper has examined the conditionality of the TPI. If the activation conditions were applied strictly, the TPI would not be able to eradicate fragmentation risk. In particular, fragmentation resulting from warranted disorderly market sentiment would not be addressed. It can be argued that in such a scenario, distressed countries should seek support from the European Stabilisation Mechanism or the Outright Monetary Transactions programme. These require recipient countries to commit to economic reforms, which countries dislike and will try to avoid. We may therefore expect that distressed countries will put the ECB under maximum pressure to use the TPI. The activation conditions fail to withstand this pressure. The difficulty in applying the activation conditions in an objective and transparent manner increases the likelihood that the ECB will yield to such pressure. It also provides the ECB room for policy discretion. Given the wealth of economic expertise at the ECB, one must assume that the Bank is aware of the difficulties in applying the activation conditions. A possible interpretation is therefore that the activation conditions are inapplicable by design. In this interpretation, TPI conditionality is a fig leaf to cover ECB policies that may go beyond its mandate.

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