Dawn of the (half) dead the twisted world of zombie identification

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Since the term was ﬁrst coined in studies on the 1990s Japanese crisis, the concept of zombiﬁcation has been investigated and revived repeatedly when concerns arise about credit misallocation and stagnating productivity growth in an economy. The starting point for these studies nearly always involves trying to identify the so-called ‘zombie’ ﬁrms. This has led in the past years to a proliferation of diﬀerent deﬁnitions and identiﬁcation methodologies. We survey the most prominent deﬁnitions, discussing advantages and limitations of each. We also undertake a comparison of methodologies on a common dataset for euro area ﬁrms from 2004-2019, with the exercise revealing limited overlap and low comparability in the ﬁrms identiﬁed by several prominent studies. In response, we introduce a formalisation of zombie-classiﬁcations which helps to make order in the growing number of variations and identiﬁcation methodologies. Moreover, this formalisation also helps extending the concept of binary identiﬁcation to that of fuzzy zombie-identiﬁcation. In particular, we introduce a general procedure to turn arbitrary binary classiﬁcations into fuzzy ones showing it successfully increases consistency between zombie deﬁnitions.

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