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QUILLEN FUNCTORS FOR TRIANGULAR

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INTRODUCTION

The present article is computing Karoubi-Villamayor and Quillen K-functors as Quillen K'-functors [2] of some trivial extensions of rings [3]. Let (associative with unity), M an R - S bimodule, N an S - R bimodule. We denote a trivial extension of the ring $R \times S$ by means of the $R \times S$ - $R \times S$ -bimodule $M \times N$ matrices of the form $\begin{pmatrix} r & m \\ n & s \end{pmatrix}$, $r \in R$, $s \in S$, $m \in M$, $n \in N$ with the fol-

$$\begin{pmatrix} r_1 & m_1 \\ n_1 & s_1 \end{pmatrix} \cdot \begin{pmatrix} r_2 & m_2 \\ n_2 & s_2 \end{pmatrix} = \begin{pmatrix} r_1 r_2 & r_1 m_2 + m_1 s_2 \\ n_1 r_2 + s_1 n_2 & s_1 s_2 \end{pmatrix}.$$

$f: R \times S \rightarrow \begin{pmatrix} R & M \\ N & S \end{pmatrix}$ induces the group homomorphisms

$$K_i f: K_i R \oplus K_i S \rightarrow K_i \begin{pmatrix} R & M \\ N & S \end{pmatrix}, i \in \mathbb{Z},$$

$$k_i f: k_i R \oplus k_i S \rightarrow k_i \begin{pmatrix} R & M \\ N & S \end{pmatrix}, i \in \mathbb{Z},$$

Additional assumptions, the homomorphisms

$$G_i f: G_i R \oplus G_i S \rightarrow G_i \begin{pmatrix} R & M \\ N & S \end{pmatrix}, i \geq 0,$$