Let $\{\alpha_k^{\infty} \}_{k=1}^\infty$ be a sequence of arbitrary (interpolation) points in $\mathbb{R} \setminus \{0\}$, $\alpha_0 = \infty$ and $\pi_n = \prod_{k=0}^n (1 - z/\alpha_k)$. Consider the function

$$b_n = \frac{z^n}{\pi_n(z)}, \quad n = 0, 1, ...$$

and the moments

$$\mu_{nm} = \int b_n(t)b_m(t) \, d\mu(t), \quad n, m = 0, 1, ...$$

If the sequences $\mu_{n0}, n = 0, 1, ...$ and $\mu_{nm}, n, m = 0, 1, ...$ give rise respectively to infinitely many solutions of the corresponding moment problems, these solutions may be partially described by the formula

$$\int \frac{1 + tz}{t - z} \, d\mu(t) = -\frac{A(z)\varphi(z) - C(z)}{B(z)\varphi(z) - D(z)}.$$

The four functions $A(z)$, $B(z)$, $C(z)$ and $D(z)$ are certain limits of quasi-orthogonal functions and $\varphi$ is in the extended Nevanlinna class.