## The BATNA approach

Another way of looking at this range of outcomes is to consider the "Best Alternative to a Negotiated Agreement" or BATNA approach to bargaining. In contrast to the added value approach, the BATNA approach asks what would a player realise if it walked-away from the negotiations: this is a player's outside option. In our example, the buyer would not receive anything if they walked away, so their outside option is $\$ 0$. If the seller walked away, they would recover its opportunity cost, so their outside option is $\$ 40$.

A seller would not accept a price less than their outside option, while a buyer would not pay a price for which their consumer surplus (i.e., WTP less that price) was negative. In notation,

$$
\begin{gathered}
p>\mathrm{Os}_{\mathrm{s}} \\
\text { and } \\
v_{B}-O_{B}-p=\mathrm{WTP}-p>\$ 0 \text { or } \mathrm{WTP}>p
\end{gathered}
$$

where $\mathrm{O}_{\mathrm{S}}$ is the seller's outside option, $v_{B}$ is the buyer's value, $\mathrm{O}_{\mathrm{B}}$ is the buyer's outside option, WTP is the buyer's willingness-to-pay (or $v_{B}-O_{B}$ ), and $p$ is the price. In our example, price must therefore, exceed $\$ 40$, the seller's outside option and must not be greater than $\$ 100$ or the buyer's consumer surplus would be negative. As in the added value example, this implies that prices may range from $\$ 40$ to $\$ 100$.

One thing that is easy to see from both analyses is that if the buyer's willingness-to-pay rises (falls) the highest possible price rises (falls) while if the seller's opportunity cost rises (falls) the lowest possible price rises (falls). Indeed, if total value falls (rises) the range of prices available will fall (rise).

