

6i bXYgdc`nY]`gi W h`NYi [Yb`bUW\`5b[f]ZZ
]a`A UfVi f[Yf`6U\b\cZ

8]Y`6i bXYgdc`nY]`? UggY`gi W h`NYi [Yb`Y]bYg`5b[f]ZZg`]a
A UfVi f[Yf`6U\b\cZ`XYf`Ua`&&"5i [i gh&\$&(`ghUhhZUbX"
<]bk Y]gY`V]hhY`a Y`XYb"

&' "\$, "&\$&(' '%&.' \$

6i bXYgdc`nY]]bgdY_h]cb`? UggY`

9]b`gWcW_]YfYbXYf`J cfZU``YfY][bYhY`g]W`Ua`8 cbbYfghU[UVYbXž
XYb`&&"5i [i ghž]a`6U\b\cZ]cb`A UfVi f["8]Y
6i bXYgdc`nY]]bgdY_h]cb`? UggY``Uh]b`Y]bYf`DfYggYa`]hhY]i b[
9fa`]hhi b[Yb`Ui Z[Ybca`a Ybž`bUWXYa`Y]b`&\$!`À\ f][Yf`A Ubbž`XYf
ni fnY]h`c\bY`ZYghYb`K`c\b]g]h`ghž]cb`Y]bYa`l bVY`UbbhYb
Ub[Y[f]ZZYb`k`i fXY"8]Y`8YhU]`g`XYg`5b[f]ZZg`UggYb`Ui Z`Y]b
; Yk`U`hj`YfVfYW`Yb`gW`]Y» Ybž`XUg`XYb`6U\b\cZ`U`g`GW`Ui`d`Uhn`ZØf
Y]b`gWcW_]YfYbXYg`9fY][b]g`k`À`hž`XUg]: fU[Yb`ni`G]W`Yf\Y]h`i bX
CfXbi b[g[YZØ\`Ui`ž`]fž"

; Y[Yb`&&`l`f`a`Y`XYhY`XYf`↑ b[Y`A`Ubbž`Yf`gY]i ba`]hhY`VUf`j`cf
XYf`Hc]`YhhYbUb`U[Y`XYg`6U\b\cZg]cb`Y]bYf`a`Àbb`]W`Yb`DYfgcb
Ub[Y[f]ZZYb`k`cfXYb"@"Ui`h`XYa`C`dZYf`[YgW`U\`X]Yg`d`Òh`]W`i bX
c\bY`J`cfk`Ufbi b[.`A`Y`fYfY`:`Ui`ghgW`À[Y`hfUZyb`]b`Ua`<`U`g`i bX
?cdZ`8]YgY`U[[fYgg]j`Y`6Y[Y[bi b[[YgW`U\`Ui`g`XYa`<]bhYf\U`hž
k`Ug`XYa`C`dZYf`_Y]bY`A`Ò[`]W`_Y]h`ni`f`FYU_h]cb`cXYf`:`i`W`h[UV"
8Ug`; YZØ\`j`cb`G]W`Yf\Y]hž`XUg`a`Ub`VY]a`5i`ZYbh`U`h`Ub`Y]bYa
ÒZYbh]W`Yb`C`fh`\UVYb`gc`hž`k`i fXY`Xi`fW`X]YgYb` , VYf[f]ZZ
a`Ugg]j`j`Yf`Y`h`h"

8Yf`J`Yf`Ui`Z`XYg`J`cfZU``g

B UWX XYa`X]Y`YfghYb`GWA`A[Y`[YZU`Yb`k UfYbž`j Yfgi`W hY`XYf
5b[fY]ZYfž`g]W`]b`F`]W`hi`b[`XYf`GWA`bY`fYghUi`fUbhg`]a`6U`b`c`Z`ni
ZØW`hYb`"8cW`k`A`fYbX`X]YgYf`:`i`W`h`ghc`d`YfhY`Yf`i`bX`Z]Y`ni
6cXYb`"8Yf`i`bVY`_`UbbhY`5b[fY]ZYf`gYhnhY`X]Y`:`Yk`U`h`Zcfh`i`bX`hfUh
a`Y`f`ZUW`Ui`Z`X]Y`6Y]bY`i`bX`:`Ø»Y`XYg`Ua`6cXYb`Y[YbXYb
A`UbbYg`Y]b`"8]YgY`Vfi`hU`Y`5i`gZØ`fi`b[`nY][`h`Y]b`YfgW`fYW`YbXYg
A`U»`Ub`5[`[`fYgg]`]h`h`i`bX`»`Aggh`XUfUi`Z`gW`Y]Y»Ybž`XUgg`XYf`H`h`Yf
a`Ø[`]W`Yfk`Y]gY`_Y]bYf`Y]`<Ya`a`i`b[Yb`U`hhY`"

8 Ug`C`d`ZYfž`XUg`Xi`fW`X]Y`GWA`A[Y`DfY`i`b[Yb`Yf`]hhi`bX`ØVYf
ghUf`_Y`GWA`a`YfnYb`_`U[hYž`gi`W`hY`]b`Y]bYf`bU`Y[Y`Y[YbYb
HUb`_ghY`Y`GWA`i`hž`V]g`X]Y`6i`bXYgdc`nY]`Y]bhfUZ`9]bY`5a`Vi`Ubn
j`Yfgcf[hY`]\`b`j`cf`C`fhž`UVYf`X]Y`d`mg]gW`Y`6YghfUZ`b[ž`X]Y`Yf
Yf`YVhYž`k`]fX`g]W`Yf`]W`Ui`W`d`gmW`]gW`Y`Gdi`fYb`]\`]bhYf`UggYb`
?`ØfdYf`]W`Y`5b[f]ZY`k`]Y`X]YgY`g]bX`b]W`h`bi`f`Y]bY`X]fY`_hY
J`Yf`Yhni`b[`XYg`≠X]j`]Xi`i`a`gž`gcbXYfb`g]Y`i`bhYf[fUVYb`Ui`W`XUg
U`[Ya`Y]bY`G]W`Yf`Y]hg[YZØ`]\`]b`i`bgYfYf`:`YgY`gW`UZh`"

8]Y`Gi`W`Y`b`UW`X`Y`a`H`h`Y`f`

8]Y`Dc`nY]`U`h`VYfY]hg`YfghY`9fa`]hhi`b[Yb`Y]b[Y`Y]hYhi`bX`gi`W`h
Xf]b[YbX`b`UW`NYi`[Ybž`X]Y`XYb`J`cfZU`VYc`VUW`hYh`U`VYb`c`XYf
≠Zcfa`Uh]cbYb`ni`f`≠Ybh]h`h`X`Y`g`H`h`Y`f`g`[YVYb`_`ØbbYb`"B`UW
5i`ggU[Y`XYg`C`d`ZYfg`U`b`XY`h`Y`g`g]W`VY]`XYa`5b[fY]ZYf`i`a`Y]bYb
A`Ubb`UZ[`U`b]gW`Yf`<Yf`_i`bZh`9f`k`]fX`VYgW`f]YVYb`U`g`Ya`UbX`a`]h
`c`W`_][Yb`<U`UfYbž`X]Y`Ub`XYb`GY]hYb`ghUf`_fUg]Yfh`g]bX`"Ni`a
NY]hdi`b`_h`XYg`5b[f]Zg`hfi`[`Yf`Y]bY`Ui`Z`A`][`Y`V`Ui`Y`5X]XUg!`UW`Y`"

8]Y`6i`bXYgdc`nY]`V]hYh`X]Y`6Yj`Ø`_Yfi`b[`i`a`A`]h`]\`ZY`K`Yf`Yhk`Ug
[YgY`Y`b`U`h`c`XYf`<]bk`Y]gY`[YVYb`_`Ubbž`k`]fX`Ui`Z[YZcfXYfhž`g]W
i`bhYf`XYf`HY`Y`Zcbbi`a`a`Yf`\$)`*`%`,`%`*`%`!`\$`c`XYf`c`b`]bY`ØVYf`X]Y
K`YVg]hY`XYf`6i`bXYgdc`nY]`ni`a`Y`XYb`"8]Y`5i`Z`_`A`fi`b[`gc`W`Yf
J`cfZ`_`Y`]gh`Y`bhgW`Y]XYbXž`i`a`Y]bYb`g]W`YfYb`ØZYbh`]W`Yb`F`Ui`a
ni`[Yk`A`f`Y]ghYb`"

F ØW`ZfU[Yb`V]hY`Ub.

6i`bXYgdc`nY]]bgdY`_h]cb`?`UggY`

<YYfghf")' (%%- '?UggY`
DfYggYgdfYWX Yf
?`Ui g`5fYbX
HY`Y Zcb.`\$) *%#,%*%*` `%%%/A cV]`. \$%+) # \$`&, ` , (
9!A U]`. `Vdc`]`_UggY`"dfYggY4 dc`]nY]"Vi bX"XY`4 Vdc`S_cV`Ybn

C f][]bU`!7cbhYbhj cb.`6i bXYgdc`]nY]]bgdY_h]cb`? UggY`ž
ØVYfa]hhY`hXi fWX `bYk g`U_hi Y`

9]b`5ddY```Ub`X]Y`² ZZYbh`]WX`_Y]h

Gc`WXY`J cfZÄ`Y`a UWXYb`XYi h]WX`ž`k]Y`k]WX`h][`Yg`]ghž`XUgg
6Øf[Yf]bbYb`i bX`6Øf[Yf`k UW`gUa` `g]bX`i bX`g]WX`]b`]\fYa` `i a ZY`X
Ui Za Yf_gUa` `j Yf\U`hYb"›XYf`_Ubb`HY]`XYf`@Øgi b[`gY]bž`]bXYa
Yf`g]Y\`h`i bX`\Øf`h`i bX`bZcfa Uh]cbYb`a Y`XYh`G]WX`Yf\Y]h`]b
ÖZZYbh]WX`Yb`F`Äi a Yb`gc`hY`ZØf`U`Y`A YbgWX`Yb`[Yk`Ä`f`Y]ghY`h`gY]bž
i bX`XUni`n`Ä`h`Ui WX`Y]bY`U_hj] Y`6YhY]]][`i b[`XYf`; Ya`Y]bgWX`UZh
VY]`XYf`5i Z`Äfi b[`gc`WX`Yf`J YfVfYWX`Yb"

8Yf`J cfZU``]a` `6U\`b\`cZj cb`A UfVi f[`k]fZh: fU[Yb`ni f`G]WX`Yf\Y]h
Ub`ÖZZYbh]WX`Yb`C fhYb`Ui Z`6U\`b\`ÖZY`g]bX`c`Zh`C fhYž`Ub`XYbYb`g]WX
j]Y`Y`A YbgWX`Yb`Ui Z`U`hYbž`i bX`g]Y`_ÖbbYb`Y]b`Yf\`Ö`hYg`F]g]_c
ZØf`[Yk`U`h`Ä]h][`Y`5i gY]bUbXYfgYhni b[Yb`XUfghY``Yb" `@Ui`h`XYf
6i bXYgdc`]nY]] [UV`Yg`]b`XYb`Y`h`hYb`›\`fYb`Y]bYb`5bgh]Y[`j`cb
; Yk`U`h`U`hYb`]b`6U\`b\`ÖZYbž`k Ug`Y]b`XYi h]WX`Yg`NY]WX`Yb`ZØf`Y]bY
VYgc f[b]gYffY[YbXY`9bhk]W`_i b[`]gh"8]Y`; fØbXY`ZØf`X]YgYb
5bgh]Y[`g]bX`j]Y`gWX`]WX`h][`i bX`fY]WX`Yb`j`cb`gc`n]U`Yb`GdUbbi b[Yb
V]g`ni`dgmWX`]gWX`Yb`DfcV`Ya`Yb`VY]`XYb`HÄ`hYfb"

8]Y`Dc`]nY]`\Uh`Y]b`j YfghÄ`f`hYg`5i [Yba`Yf`_`Ui`Z
G]WX`Yf\Y]hga`U»bU\`a`Yb`]b`6U\`b\`ÖZYb`[Y`Y[`h"8Uni`[Y\`ÖfYb
i bhYf`UbXYfYa`X]Y`GhY][`Yfi b[`XYf`DfÄ`gYbn]j`cb
G]WX`Yf\Y]hg`fÄ`ZhYbž`X]Y`›ghU``Uh]cb`j`cb`,`VYfk`UWX`i b[g`_Ua`YfUg
gck]Y`X]Y`9bhk]W`_i b[`j`cb`DfÄ`j`Ybh]cbgd f c[fUa`a`Ybž`X]Y`XUfUi`Z
UVn]Y`Ybž`[Yk`U`h`Ä]h][`Y`5i gY]bUbXYfgYhni b[Yb`]a`?Y]a`ni
Yfgh]W`_Yb"›9g`V`Y]Vh`Y`XcWX`UVni`k`UfhYbž`cV`gc`WX`Y`A`U»bU\`a`Yb
`Ub[Zf]gh][`k`]f`_gUa``gY]b`k`YfXYb"

8]Y 'F c ``Y 'XYf '2 ZZYbh`jWk _Y]h

⊕`G]hi Uh]cbYb`k]Y`X]YgYb`_ca a h`XYf`N]j]`VYj Ò`_Yfi b[`Y]bY
k]Wk h][Y`F c ``Y`ni " `NYi [Yb`_ÒbbYb`cZh`Yb hgWk Y]XYbXY
⊕Zcfa Uh]cbYb`]YZYfbž`X]Y`ni f`⊕XYbh]Z]n]Yfi b[`j`cb`HÀhYfb`cXYf`ni f
5i Z`Àfi b[`j`cb`J`cfZÀ``Yb`VY]hfU[Yb`"8U\Yf`]gh`Yg`Yfa i h][YbXž
XUgg`X]Y`6i bXYgdc`nY]`U_hj] `i a `A]h]`ZY`XYf`2 ZZYbh`jWk _Y]h`V]hhYh"
9g`nY][hž`XUgg`X]Y`Ni gUa a YbUfVY]h`nk]gWk Yb`Dc`nY]`i bX`6Øf[Yfb
j`cb`[fc»Yf`6YXYi hi b[`]ghž`i a `X]Y`G]Wk Yf\Y]h]b`XYf`; YgY`gWk UZh
ni `Yf\Ò\Yb"

B UWk `XYb`U_hi Y`Yb`GhUh]gh]_Yb`]gh`X]Y`?f]a]bU`]hÀh`]b`8Yi hgWk `UbX
]bg[YgUa h`]b`XYb`Y`hnhYb`⊕\fYb`[Ygi b`_Ybž`U`YfX]b[g`[]Vh`Yg
gdYn]Z]gWk Y`6YfY]Wk Yž`]b`XYbYb`Y]b`5bgh]Y[`ni `j`YfnY]Wk bYb`]gh"
6Yf]Wk hYb`ni Zc`[Y`g]bX`; Yk U`hXY`]_hY`]b`ghÀXh]gWk Yb`NYbhYb`i bX
6U\b\ÒZYb`\Ài Z][Y]b`DfcV`Ya "8]Y`<YfUi gZcfXYfi b[Ybž`X]Y`a]h
XYf`; Yk À\f`Y]ghi b[`XYf`ÒZZYbh`jWk Yb`G]Wk Yf\Y]h`Y]b`Yf[Y\Ybž
g]bX`_ca d`Yi `i bX`YfZcfXYfb`Y]bY`i a ZUggYbXY`GhfUHY[]Yž`X]Y
gck c`\`dfÀj Ybh]j Y`U`g`Ui Wk `fYU_hj] Y`A U» bU\`a Yb`i a ZUggH"

GhUh]gh]gWk Y`8 UhYb

GhUh]gh]_Yb`ni f`?f]a]bU`]hÀh`]a `ÒZZYbh`jWk Yb`FUi a `nY][Ybž`XUgg`]a
⊕\f`&\$&%`X]Y`6i bXYgdc`nY]`a Y\f`U`g`%*`\$`\$`\$`8Y`]_hY`]a `6YfY]Wk
j`cb`6U\b\ÒZYb`i bX`NØ[Yb`fY[]ghf]YfhY"8]Yg`ghY`h`]a `JYf[`Y]Wk
ni `XYb`J`cf`U\`fYb`Y]bYb`g][b]Z`_UbhYb`5bgh]Y[`XUf" @Ui h`XYa
6Yf]Wk h`XYg`6i bXYg`_f]a]bU`Ua hg`f6?5L`[UV`Yg`XUVY]`Ui Wk `Y]bYb
5bgh]Y[`XYf`; Yk U`hXY`]_hYž`X]Y`]b`6U\b\ÒZYb`VY[Ub[Yb`k i fXYb"
5i g`XYb`8UhYb`[Y\h`Yfj`cfž`XUgg`Yhk U`%) i `XYf
; Yk U`hj`YfVfYWk Yb`]b`XYb`Y`hnhYb`⊕\fYb`Ub`6U\b\ÒZYb
ghUhhZUbXYb"8]YgY`NU\`Yb`j`YfXYi h]Wk Yb`X]Y`K]Wk h][_Y]h]j`cb
G]Wk Yf\Y]hga U» bU\`a Yb`i bX`XYf`GYbg]V`]g]Yfi b[`XYf
2 ZZYbh`jWk _Y]h`ZØf`dchYbn]Y`Y`; YZU\`fYb`]b`gc`Wk Yb`i a [YVi b[Yb"

5b[Yg]Wk hg`X]YgYf`9bhk]W`_i b[Yb`]gh`Yg`i bYf`Àgg`]Wk ž`XUgg`X]Y
6Y\`ØfXYb`dfcU_hj] `U`bXY`b`i bX`X]Y`2 ZZYbh`jWk _Y]h`Yfa i h][Ybž
Ui Za Yf_gUa `ni`gY]b`i bX`j`YfXÀWk h][Y`5_hj]]hÀhYb`ni`a`Y`XYb`
9]bY`g]Wk YfYfY`i a [YVi b[`_Ubb`bi`f`Xi`fWk`[Ya`Y]bgWk UZh`]Wk Yg

9b[U[Ya YbhYffY]W\h'k YfXYb"K Y]hYfY' bZcfa Uh]cbYb'i bX
GhUh]gh]_Yb'g]bX'Ui ZXYf'K YVg]hY'XYg'6i bXYg_f]a]bU`Ua hg'ni
Z]bXYbž'k c'NU\`Yb'ni f'?f]a]bU`]hÅh']b'8Yi hgW\`UbX'di V`_]
[Ya UW\h'k YfXYb"

8YhU]`g

6Ygi W\Yb'G]Y'i bg'Ui Z.'b!U["XY